The SHIPPING WORLD

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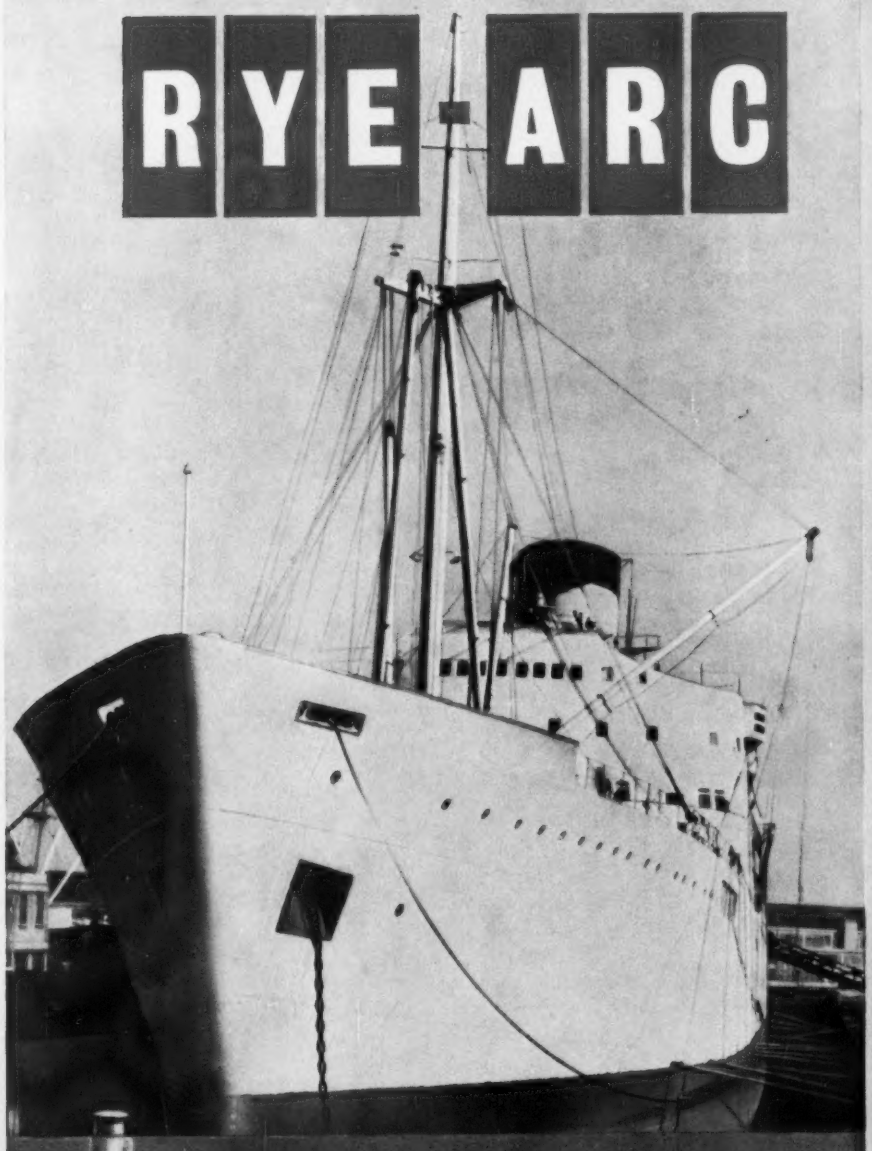

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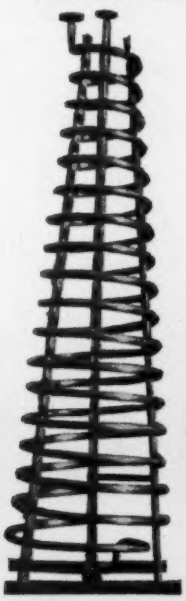

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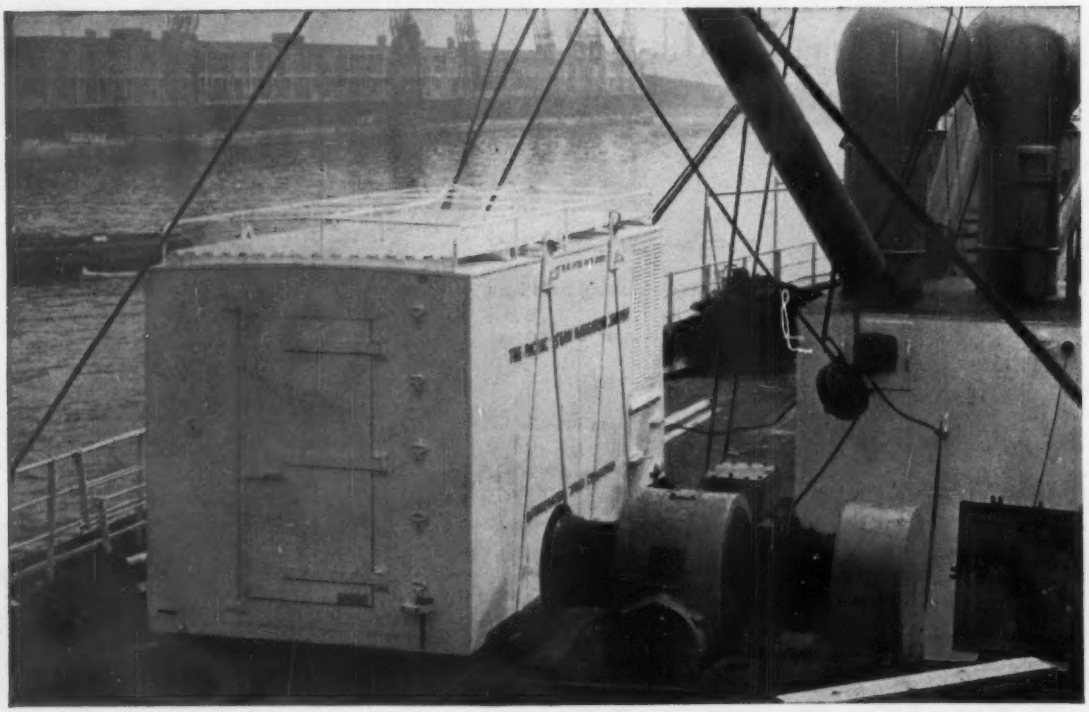

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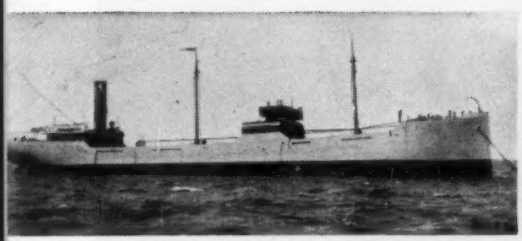
The Swedish shipowners, Trafikaktiebolaget Grängesberg-Oxelösund, have recently taken delivery of the ore/oil carrier Matarengi. This is the 40th vessel built by Götaverken for them.



S/S Abisko, 4,800 tons d.w., built 1912. One of the first ships built by Götaverken for the Grängesbergsbolaget.

M/S Matarengi, 34,250 tons d.w. Götaverken diesel engine of 9,350 b.h.p.

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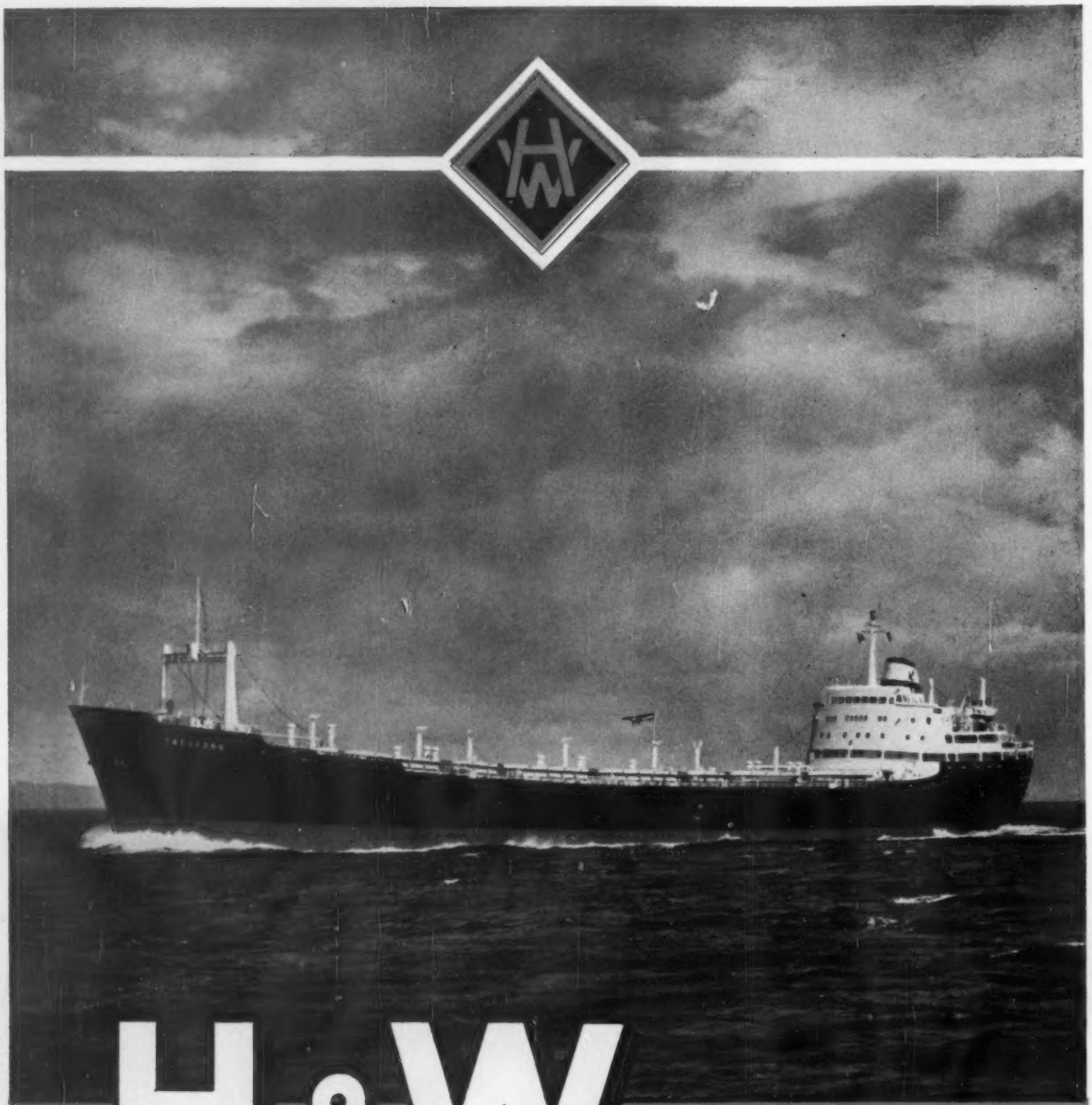

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M.V. "TRESFONN" a bulk carrier recently delivered for the Sigval Bergesen group of Norwegian shipping companies. She is one of seven vessels aggregating nearly 200,000 deadweight tons built or building for this owner at Belfast.

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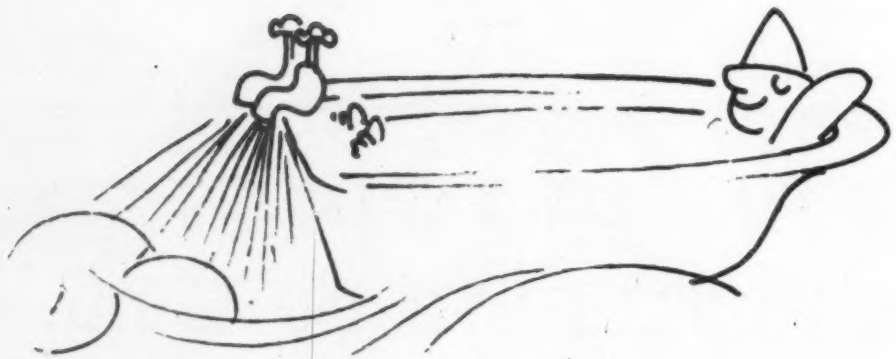

Sixty-five years ago, a certain transatlantic liner had only one bathroom. Today, liners are more likely to have one for every cabin. Add to that Turkish baths, post-offices, manicurists, and all the trappings of several great palace-type hotels. And hundreds of machines, auxiliary and main, to light, to heat, to propel.

Want to know what it feels like to fuel the big liners? Well imagine standing on a quay on a fine sunny morning, and seeing Brighton Esplanade steaming majestically towards you (all its hotels going full swing) and the Mayor demanding a variety of fuels to run the municipal amenities, and enough bunkers to propel his Esplanade back to New York. You might cut and run back to mother. We wouldn't, because we're used to it. We've been bunkering liners for a long, long time now.

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THE SHIPPING WORLD

THE WAY AHEAD

TWO YEARS ago, the Chamber of Shipping of the United Kingdom in its annual report devoted its special attention to what it described as "the growing crisis for British shipping". It pointed out the steady decline over the past fifty years in the relative share of the United Kingdom in world tonnage, and urged that the time for action had arrived. Last year, under the heading "Facing the Facts", the annual report focused attention on some of the important issues faced by British shipowners set against the background of the experience of the past, and it emphasised that the Government and the industry must work even more closely together. The principal item of this year has been of course the survey of British shipping, with recommendations as to policy, submitted by the industry to Her Majesty's Government at the end of 1960, and much of the annual report of the Chamber, abstracts of which are given on other pages in this week's SHIPPING WORLD, is devoted to underlining the main headings of this important document.

It is becoming increasingly clear that the difficulties in which world shipping finds itself—and many of these difficulties apply as much to the other traditional maritime nations as to Britain—cannot be resolved by the industry itself. International shipping is faced almost daily with new restrictions and obstacles in the performance of its essential functions as the carrier of world trade, three-quarters of which moves by sea. Unfortunately these restrictions and obstacles are steadily undermining the conditions of free and fair competition under which international shipping can best, and most economically, continue to provide its essential services. As the annual report states, shipowners are faced with a revival of the narrow restrictionism of the past in the form of a doctrine of economic nationalism on the part of an increasing number of nations in respect of their seaborne trade and, at the same time, with increasing interference on the part of governments in their day-to-day operations.

No fewer than 40 governments, the annual report claims, in recent years have been actively seeking, in one way or another, to divert to ships of their own flag cargoes which in the normal way would be carried by ships of all flags, according to current market conditions. Many of them, in addition to other methods of flag discrimination, include provisions in bilateral trade treaties reserving cargo to ships of the two countries concerned. Commercial considerations and the vital spur of competition, resulting from the merchant's freedom of choice, have gone by the board, and world trade is saddled with a wholly unnecessary addition to its transport costs. Unless these policies are discarded, or at least much modified, the vast and intricate network of competitive and international shipping services, on which economic and efficient sea transport has hitherto depended, must inevitably disappear. It is a matter far beyond the scope of shipowners themselves to control. They must have the support of the Government in dealing with other governments; and it is seriously open to question whether the whole affair is not far beyond the scope of a Government Department which is inevitably preoccupied with internal transport questions.

Current Events

Need for Shipbuilding Credit

REASONABLE PRICES and delivery times in present circumstances are not the only requirements for obtaining orders for the shipyards; adequate credit facilities are equally important, and this respect British shipbuilders are inadequately armed. Mr J. H. King, chairman of Austin & Pickersgill Ltd, drew attention to this point at the launching of the 10,600-dwt bulk carrier *Booker Venture* for Booker Bros. (Liverpool) Ltd. The order for this vessel was awarded to the recently modernised Southwick Shipyard after a total of 76 British, European and Japanese shipbuilders had tendered; and the ship has reached the launching stage in 13 weeks and will be completed within another seven weeks. Mr King stated that the launching had, in fact, been delayed by two weeks owing to the non-delivery of steel, and long periods of wet weather had also hampered operations. But speed of delivery, price and quality were not enough, Mr. King said, because of the extensive credit facilities which foreign builders enjoy, and which enable them time and again to get an order in the teeth of competition from British yards. British shipbuilding, he continued, did not want charity or subsidies, but it did want, and must have, a simple measure of Government support. "Surely in this country, which is supposed to have a genius for finance, we can provide some techniques which will enable this to be done. It is up to the Government to find some way for these facilities to be provided. If other people can

do it", he asked, "why can't we?". On page 211 readers will see what recent steps have been taken in Denmark to provide shipbuilding credit facilities.

An Interesting Ship

THE *Booker Venture* is an interesting ship in many ways. She has been designed primarily to carry sugar to the United Kingdom and Canada from British Guiana, where the Booker organisation is the largest sugar producer. The new ship has been designed in conjunction with the facilities of the £1,600,000 bulk sugar installation recently completed at Georgetown for Demerara Sugar Terminals, a company in which the Booker shipping group holds the majority of the share capital. She will have a maximum cargo deadweight of over 10,000 tons, and even over the shallow Georgetown Bar she will be able to lift more than 7,000 tons, despite the 20ft draught limitation imposed. In view of the fact that for about four months each year sugar will not be available from British Guiana, the owners decided on a vessel of a size suitable for general world tramping and the St Lawrence Seaway, and, accordingly, a subsidiary design requirement has been that she should be suitable for carrying grain, ore and other bulk cargoes. A big factor in this decision was, of course, the fact that building and operating costs do not increase proportionately with increased deadweight. Particular attention has been paid in the design to the provision of maximum amenities for the officers and crew. The ship will be air-conditioned throughout and all bulkheads are to be lined with hard-faced plastic. Every officer will have his own shower, wash basin and W.C., while every crew member will have his own single-berth cabin on the poop deck. Particular thought has been given by the owners to facilities for wives living on board when the ship is in a home port, and one result of this is that all officers' and POs' beds have been made to extend to 4ft 6in.

Absolute Warranty of Due Diligence

THE appeal decision in the House of Lords in the case *Riverstone Meat Co Pty. Ltd* v *Lancashire Shipping Co Ltd.* giving judgment in favour of the shippers of cargo and reversing the decisions given by the lower Courts, has given rise to considerable discussion in legal circles. To shipowners this judgment is of the utmost importance as it appears to extend their responsibilities for cargo shipped under bills of lading subject to Hague Rules legislation beyond what has been previously accepted as the duty of due diligence to provide a seaworthy ship at the beginning of the voyage. In the circumstances of this case it appears to extend this responsibility to the consequences of negligent acts of employees of shiprepairers. In the lower Court and in the Court of Appeal the judgments were in favour of the shipowners, but, in the opinion of the House of Lords, these judgments did not pay sufficient regard to the meaning of the words "to exercise due diligence to make the ship seaworthy" in the context of the Hague Rules and their history. The shipowners did not, by entrusting their vessel to reputable shiprepairers for special survey work and annual loadline survey under supervision of an experienced and competent marine superintendent, perform their duty to exercise due diligence. They were, therefore, vicariously liable for the negligence of the servant of an independent contractor.

Admiralty Orders for Ships

THE explanatory Statement published by the First Lord of the Admiralty to introduce the Navy Estimates for the year normally contains something new about ship construction. This year it reveals that orders are shortly to be placed for five new ships. Two of these are fleet replenishments tankers, two are additional guided missile destroyers of the *Hampshire* class, and the last is what is termed an assault ship. All are to be built in private shipyards; and in the case of the tankers, tenders are at present under consideration. No doubt the tankers will be a development of the four Tide class vessels which represent the only postwar construction by the Admiralty in this field. The destroyers, too, will be a development of the four ships of the *Hampshire* class now under construction. They will be equipped with a Mark II version of the Seaslug guided missile, giving greater range and speed, and this will subsequently be fitted in the four earlier ships as well. The assault ship will be a vessel of 10,000/15,000 tons displacement, and will be modelled on the Landing Ship Dock type of vessel developed during the war. (One of these, renamed the *Carib Queen*, achieved brief notoriety in commercial trans-Atlantic service a few years ago.) She will have an open stern, and will be able to ballast herself down in the water so as to allow small tank-carrying landing craft to berth inside her. Working with the commando carrier, she will be able to carry heavy vehicles and tanks wherever they are required, and land them on shore by means of her landing craft. The fact that the ship is to operate with the commando carrier suggests that a speed of about 30 knots will be needed, and this may be difficult to combine with the large square stern. It also suggests—as there are to be two commando carriers—that another assault ship will be ordered in time.

U.S. Coastal Controversy

BITTER competition has developed between two steamship companies planning fully containerised intercoastal services: the Luckenbach Steamship Company and the American-Hawaiian Steamship Co. Both are long-established operators in the trade, though American-Hawaiian has operated no ships since 1953. Luckenbach presently has five conventional C3 and C4 vessels plying the route. The present controversy revolves round the impending decision of the Federal Maritime Board on granting Federal mortgage insurance under Title XI of the Merchant Marine Act, for which both have applied in furtherance of their construction programme. Luckenbach plans a $35-mn fleet of container ships "jumboised" from a group of T2 tankers and wartime escort carriers it recently acquired. Each ship will be 655ft long, carry 825 containers, and cover the coast-to-coast route in 12 days. American-Hawaiian plans new construction of three 900-ft vessels, to carry 1,000 containers each, and complete the one-way run in nine days at a speed of 24 knots. Bids opened on February 8 indicated that Sun Shipbuilding & Dry Dock Co was low, with its offer to build the trio for $20,364,383 each. Both programmes will require mortgage insurance, the only form of public assistance available to operators in the domestic trades. It has been stated that the Federal Maritime Board has already determined that it will be economically feasible to grant only one of the applications. Within an hour after the opening of the American-Hawaiian construction bids by chairman Samuel H. Moerman, it was announced by Edgar F. Luckenbach, his counterpart in the rival company, that if their bid were denied, Luckenbach would at once abandon their 110-years-old service, leaving the intercoastal route without a single carrier while the American-Hawaiian ships were being built.

Dangerous Cargo

OUTBREAKS of fire in cargoes of sunflowerseed expellers in recent years have been relatively few. For some reason which is not quite clear, however, expellers produced from the 1960 crop of sunflowerseed appear to be more dangerous than usual. J. E. Turner & Co S.A., of Buenos Aires, report that since September there have been at

least nine cases of outbreaks of fire. In some instances water was used to extinguish the fire, causing great loss of time as well as damage to other cargo. An Argentine vessel had to put back to Buenos Aires three days after sailing, proceeded to discharge a quantity of sunflower-seed expellers, and this continued to burn for some time, most of it being finally condemned. The first few cases seemed to arise from the fact that for one reason or another the ship had been delayed in port, where it is not easy to take the usual precaution of keeping the decks continually wet (which of course helps to keep down the temperature), but the case of the Argentine ship was not one of those. Inquiries elicited the information that the sunflowerseed expellers which had caused the trouble had not emanated from any particular factory or any one zone, but had been produced in mills in many different parts of the country.

Additional Precautions

BEFORE the first few fires occurred some years ago, it had been customary to use normal stowage for expellers and it was calculated they occupied about 75 grain feet per ton. Since the recent fires surveyors are insisting on additional precautions, including extra spaces for air channels and a great deal of extra dunnaging, with the result that not only have loading expenses increased, but also the stowage factor must now be calculated at 95 grain feet per ton. Up to recently some regular lines were refusing to take sunflowerseed expellers, and others were accepting them at the same rate as other expellers or 50 cents extra. Now the great majority are refusing to have anything to do with them. The Argentine State Fleets seem to be still accepting that commodity at 50 cents or a dollar extra, but the very few others who might still be induced to carry sunflowerseed expellers are talking of charging anything up to $2.50 extra to cover the costly and slow loading, the high stowage factor, and the not inconsiderable risk involved.

Life of Tug Machinery

THE old steam tug is a familiar sight in many harbours, with machinery that remains reliable after many years' service but is expensive in fuel consumption. It is increasingly being replaced by modern craft with modern—probably diesel—machinery. In a paper which he read to the Diesel Engineers & Users Association last Thursday, Mr J. B. Griffith of Richard Dunston Ltd. drew attention to one problem which is arising in the design of modern vessels of this type. Experience shows that owners expect, and have been getting, a life of anything up to 50 years from tugs, and the scantlings to which new tonnage is built suggest that current construction should be equally long-lived. However modern propelling machinery is unlikely to last the life of the tug, if only because spare parts may not be available for an engine that has gone out of production. Mr Griffith suggests that the alternatives are either to build a cheaper hull having a shorter expectation of life, or to match hull to machinery on the expectation of a half life or one-third life for the machinery. The first of these alternatives will inevitably introduce much greater depreciation charges; but these, he thinks, this should be partly recompensed by decreased maintenance and operational costs when the time comes for replacement. As to the second, while an owner who built a motor vessel with a direct-reversing diesel engine of 250 rpm in 1935 can today replace the engine with one of similar type without great expenditure on seating modifications, it is unlikely that one who builds today will be similarly placed when the time comes.

Agreement Not to Strike

SEMI-SKILLED and unskilled workers in the Clyde shipyards are seeking an increase in keeping with the increase granted recently to welders, burners and other skilled tradesmen. Eight yards in the Greenock and Port Glasgow area are involved and nine trades are represented in the application, which is being advanced by the National Union of Muncipal & General Workers. These men were all involved in the stoppages which preceded the increased wage grant to the skilled trades, being thrown idle by the action of the tradesmen. As a condition of the increases which were granted these workers agreed to avoid strike action for two years, to cooperate in increasing productivity and to use the existing machinery in the industry to the fullest extent. A similar condition could apply to any increase granted to the remaining trades, bringing the yards in this area to a common pattern which would allow reasonable continuity of working without the danger of stoppages arising through the action of any group, with repercussions on remaining trades.

Taken by the "San Francisco Examiner", this photograph shows the P & O-Orient liner "Oriana" passing under the Golden Gate Bridge as she entered San Francisco harbour on February 5

ON THE "BALTIC"

LARGE VESSELS CARRYING GRAIN

By BALTRADER

Less business has been recorded in the charter market in the past fortnight than in earlier weeks of the year; there is, all the same, good inquiry from the River Plate, India and South Africa. North American grain is moving steadily to this side, but much of it in vessels which take a great quantity of cargo from the market at one time. Generally the very large vessels discharge on the Continent; for instance the *Naess Pioneer*, 25,000 tons, will take heavy grain etc from United States Gulf to Antwerp, Rotterdam or Amsterdam, but a vessel of about 20,000 tons capacity for heavy grain was fixed from U.S. North of Hatteras to London at the modest rate of 35s 6d per ton, but with discharge free of expense to the owners at 3,000 tons per day, which places a United Kingdom port in the same category as the great Continental ports. This compares with a fixture arranged at about the same time involving a vessel of 10,700 tons from U.S. North of Hatteras to Liverpool or Birkenhead at 50s with the usual 1,000 tons per day guaranteed for discharge and a stevedoring charge to the owners of about 5s 6d per ton.

The large vessels which come into London with grain at a low rate of freight but rapid discharge guaranteed have aroused some comment from owners discharging under the normal United Kingdom conditions. They suggest that a big competitor is surrounded with throbbing discharge appliances while they have to be content with the attention of perhaps only one sucker. However this may be, it is true that when any unusual number of vessels arrive with grain in London there is delay because there are then not enough appliances for rapid discharge. One would have thought that London, of all ports in the world, would have enough and to spare for all the equipment required for the reception of grain. One remembers, however, in the years after the last war that our capital expenditure was severely rationed, while the devastated countries of Western Europe were able without any restriction to equip their ports and manufacturing areas with every modern aid to competition.

Chinese Continue to Charter

The Chinese charterers, in spite of their great chartering activity in recent weeks, have by no means covered all their requirements; these are not confined to tonnage necessary to carry their large purchases of grain. They continue to take vessels on time charter and they quote for vessels on voyage basis from the Near Continent and Italy to China with fertilisers, soya beans from China to Cuba, sugar from Cuba to China, and dates to China from the Persian Gulf. Progress in actual fixing is certainly slower than it was, partly because less tonnage remains which is suitable and whose owners are interested in the business, and perhaps because the charterers are rather less pressed and are therefore more difficult to please in the matter of rates and terms of charter. China in these days appears constantly in accounts of the daily activities of the freight market; most of the trampship owners of the world, apart from those centred in America, have come to like the employment which is offered to them from Peking. Members on the "Baltic" often ask each other what the day's market would be like if it were not for the number of vessels occupied with cargoes to and from Chinese ports.

In the timecharter markets, West African round voyages were prominent at rates between 14s 3d and 20s per ton per month according to type. The interesting feature is that whereas the charterers in that trade have generally confined their attention to vessels of the type specially suitable for their requirements, they have now taken several ships of wartime standard type. This confirms the opinion which one already held that recent heavy chartering has appreciably narrowed the choice of tonnage available. On the other hand, the Chinese charterers have lately taken vessels of wartime vintage only if better types were not to be had in sufficient quantity and, taken as a whole, the Empire, Fort or Liberty vessel is not particularly prosperous at the present time. The Liberty is well liked in the scrap cargo trade, but is not making much money out of that employment unless operating on low running costs. All these types of vessels now have to carry considerable running expenses in repairs and many are approaching or have reached the time when anything from £20,000 to £50,000 may have to be spent on them for special survey.

The fact remains that there is a quiet market for purchase of warbuilt tonnage. Some owners who do not lack experience have lately been paying up to £120,000 for a warbuilt ship with survey passed, and £95,000 with survey due. These would be large sums of money to spend if the buyers thought that their purchases were dead ducks. Other owners who have no intention of following the example will hope that the ventures prove right, for it will need a higher level of freights to make the warbuilt ship a money spinner.

The Freight Markets

Freight markets have been quiet in the past week, possibly affected by holidays here and there, although the Chinese charterers continued to negotiate throughout their New Year celebrations. Chartering from the River Plate was mainly for Japan.

Fixtures include the following: *Pan*, 14,000 dwt, Hampton Roads to Japan, $8.30, coal, March; *Basil II*, 9,600 dwt, heavy grain, Baltimore to Avonmouth, 47s 6d, March 1/8; vessel, 9,500 dwt, 475,000 cu ft bale, U.S. North of Hatteras to Japan, $108,000, scrap, March 4/14; *Vinland*, 15,000 dwt, St Lawrence to London, 36s, heavy grain, April 26/May 15; *Nordsee*, 9,000 dwt, Halifax to picked ports United Kingdom, 47s 6d, wheat, March 4/20; *Atlantic Guardian*, 13,500 dwt, U.S. Gulf to Japan, $125,550, grain, February 24/March 10; *Sunvictor*, 11,500 dwt, Baltimore to Hull, 50s, heavy grain, March 1/10; a Chapman & Willan vessel, 10,000 dwt, 67 cu ft grain guaranteed, up River Plate to Moji-Tokyo range, 102s 6d, Clause 6 excluding sunflower seed and expellers, July 20/August 31; vessel, 11,000 dwt, up River Plate to Japan, 90s 6d, maize, up to 2,500 tons pollards, June; *Tremorvah*, 6,600 dwt, up River Plate to Moji-Tokyo range, 129s, pollards, guaranteed 90 cu ft, March 29/April 25.

Time charter fixtures include *Trelawny*, 9,185 dwt, 540,000 cu ft bale, 12½ knots on 13½ tons fuel oil, trip, delivery London, redelivery New Zealand, 22s 6d per month, March 13/20 (Port Line); *Reinholt*, 9,180 dwt, 487,000 cu ft bale, 13/13½ knots on 15 tons diesel oil, trip delivery U.S. North of Hatteras redelivery Australia-New Zealand, 22s 6d with ballast bonus £5,000, or £4,750 bonus if delivery Eastern Canada, or £4,250 bonus delivery Newfoundland, March 13/25 (Manz Line); *Mutlah*, 9,910 dwt, 472,000 cu ft bale, 10½/11 knots on 11½ tons fuel oil, 18s 4½d per month, one West African round, delivery London, March 1/6.

Shipping and World Trade

ABSTRACTS OF THE CHAMBER OF SHIPPING ANNUAL REPORT

MUCH has been written in the past about the recourse of nations to the doctrine of interdependence and their growing awareness of the benefits of cooperation and liberalisation in their trading relations. While this awareness finds increasing practical expression in the sphere of visible trade—the proposed Organisation for Economic Cooperation and Development being the latest example of this—international shipping is faced almost daily with new restrictions and obstacles in the performance of its essential functions as the carrier of world trade. With some three-quarters of the goods moving in international commerce carried by sea, the vital importance to world trade of efficient and economic sea transport needs no stressing. Unfortunately, the restrictions and obstacles being increasingly encountered are steadily undermining the conditions of free and fair competition under which international shipping can best continue to provide its necessary services.

Shipowners are faced with a revival of the narrow restrictionism of the past in the form of a doctrine of economic nationalism on the part of an increasing number of nations in respect of their seaborne trade and, at the same time, with increasing interference on the part of governments in their day-to-day commercial operations.

Discriminatory Measures

On the first count, some 40 governments have, in recent years, been actively seeking, in one way or another, to divert to ships of their own flag cargoes which in the normal course would find their way into ships of all flags, dependent on the current market conditions. Of these 40 governments, some 35 have—in many cases, in addition to other discriminatory measures—included in bilateral trade treaties provisions aimed at reserving the cargo moving under these treaties to ships of the two countries concerned. Commercial considerations and the vital spur of competition, resulting from the merchant's freedom of choice, have gone by the board and world trade has been saddled with a wholly unnecessary addition to its transport costs.

Unless these policies are discarded or at least much modified, the vast and intricate network of competitive and international shipping services, on which economic and efficient sea transport has hitherto depended, must inevitably disappear.

It must be reiterated that there is little that shipowners or traders can themselves do to stop this trend. Where cargo is directed to ships of a national flag shipowners are denied the very right of competing. In other cases of discrimination where, for example, prohibitive import duties are imposed unless the goods are carried in national-flag ships, it is the exporter who has no option if he wishes to retain his interest in the trade.

Between these two extremes, there is a wide field in which other compelling pressures can be brought to bear on traders. This is particularly so in trade with those countries where government departments or national corporations have taken over the rôle of the private trader. In such cases it is all too easy for those so minded to direct both exports and imports to ships of the national flag by selling c.i.f. and buying f.o.b.

A Problem for Governments

It is appreciated that, in the face of pressures of this nature, the individual trader can do little. For him, as for the shipowner, the problem has been created by governments and its solution lies in the hands of governments. However, if governments are to be convinced of the need to take action, the private trader must be prepared to bring all his influence to bear, both nationally and internationally, in support of the principle of free and fair competition.

Although it is the shipowner who first feels the effects of flag discrimination, the trader and world trade in general are the ultimate sufferers. There are at last some signs that this lesson has been learned. Traders are now recognising the economic consequences of flag discrimination and are raising their voices in protest. Freedom to ship cargoes in vessels of the trader's own choice will almost certainly be determined by commercial considerations alone. As long as there is no governmental infringement of this freedom there can be no complaint of flag discrimination.

It is against this background that the current "Ship-American" campaign should be viewed. Initiated by United States shipping interests on a nation-wide basis, the campaign is based on two major premises, the U.S. balance-of-payments deficit and the assertion that the share of U.S. foreign seaborne trade carried in U.S.-flag ships is decreasing. Apart from the direct appeal to U.S. exporters and importers the shipping interests are demanding an increased percentage of "government-sponsored" cargoes and some have even suggested that there should be governmental direction of commercial cargoes to U.S.-flag ships.

British shipowners have long emphasised the importance of reaching an identity of interest with the United States in the whole field of shipping policy, and this, it is understood, has been one of the main objectives of the intergovernmental talks begun in Washington in June 1959 and continued at intervals since then. To date, little progress on these lines has been reported.

In the meantime, however, the position as regards flag discrimination in particular has steadily deteriorated and with no prospect of any effective alternative action being taken, it should have caused no surprise that British shipowners urged, in the policy recommendations they made in December, that the Government should equip itself with such general powers as it needed for the effective application of counter measures as and when deemed necessary and appropriate.

Government Regulation of Shipping

The scope and implications of the current United States investigation into the liner conference system have continued to increase and have caused mounting concern to both British and other lines trading to the United States. It may perhaps be helpful to recall briefly the sequence of events which prompted this investigation. In 1958 the United States Supreme Court ruled against the dual-rate contract system in a particular trade and this decision threw into doubt the validity of the system. To allay these doubts Congress specifically legalised the dual-rate system for two years, during which time two committees, referred to as the Bonner and Celler committees, were to make a thorough study not only of the dual-rate system but also of the position of liner conferences in relation to the United States anti-trust legislation. As these committees had not completed their inquiries within the allotted time the period of *status quo* was extended to 30 June 1961.

In the course of the year the Federal Maritime Board itself commenced a widespread investigation of liner activities to and from America by issuing an Order under Section 21 of the Shipping Act, 1916, requiring every liner company trading to and from the United States to file a large number of documents, many of which were held outside the United States and some of which related to activities taking place wholly in other countries, for example, stevedoring and agency contracts in foreign ports. The British lines considered, as did the other non-American lines concerned, that the Order was a totally unwarranted intrusion into their everyday business activities. The lines, through their American lawyers, objected to the Order and the matter is now before the Columbia circuit of the Court of Appeals.

Of the 33 countries whose shipping is affected by the Order, the governments of 12, including those of the United Kingdom, the Scandinavian countries, Germany, India, Italy, Japan and the Netherlands, lodged strong protests against the Order with the United States authorities. In addition, a letter was issued by the Minister of Transport on December 29 to the British lines named in the FMB Order, requiring them not to file with the FMB, in pursuance of the Order, any documents outside the United States or any particulars of oral transactions, being documents or particulars which they would not have filed apart from the Order.

It has been reported that the day-to-day activities of tramp owners who may trade to America are now also being made the subject of widespread inquiry and investigation.

The international implications of these investigations and the proposed new regulatory legislation which they foreshadow have been clearly outlined by the State Department itself. In a letter in reply to a request from the chairman of the Senate Committee on Interstate and Foreign Commerce for its views "as to whether strict rate or other shipping regulations imposed by this Government would be adverse to objectives of American foreign policy, contrary to accepted principles of international law, and might precipitate reprisals which would put our domestic industry at a disadvantage", the State Department made the following observations:

"A number of the foreign governments which protested against both the grand jury subpoenas and the Federal Maritime Board Order expressed surprise that the United States would launch a sweeping investigation of their shipping, extending to matters which they also considered to be within their jurisdiction and to trades in which they have an equal right to prescribe regulations, without advance consultation with the governments concerned. Some manifested their particular disappointment because the United States, after having apparently disregarded their formal protests concerning the grand jury's subpoenas, had proceeded four and one-half months later to initiate another comprehensive and partially overlapping interrogation through another United States agency.

". . . .It is not considered that investigations involving shipping lines subject to the jurisdiction of the United States contravene international law. However, as you emphasise and as the Department of State fully agrees, an international steamship service plies between at least two countries. Should more than one claim the right unilaterally to regulate such a service, a conflict of jurisdiction might ensue.

". . . . In response to your question concerning the extent to which common carriers in trade with the United States should be regulated by the United States, the Department of State foresees that difficulties will continue to arise in our relationships with other maritime nations in proportion to the extent that the United States asserts a regulatory authority which interferes substantially with the long-established and generally accepted pattern of shipping practice in foreign trade.

"Governments of practically all nations that supply shipping services to the world consider shipping conferences and their practices as purely commercial activities in which their governments should not—and in practice do not—unilaterally intervene. On the other hand, nations which largely depend upon the shipping services of other countries are only too ready to believe that regulation can be unilaterally imposed upon those shipping services. Because of this attitude it would appear most important to our foreign policy that the United States Government consider carefully any future action in the general field of governmental regulation of shipping engaged in the foreign commerce of the United States.

". . . . Finally, the Department of State is of the opinion that, from the standpoint of international relations, no further departures from the international pattern should be made unless a clear and conclusive necessity therefore is demonstrated, taking into full consideration the foreign policy implications."

United Kingdom Merchant Fleet

Lloyd's Register of Shipping figures at mid-1960 show that the tonnage on the United Kingdom register was just over 21 million grt, but that the proportionate increase for the year (1.8 per cent) was again considerably smaller than that for the world as a whole (3.9 per cent). One effect of the increased amount of old tonnage being broken up, coupled with the continued delivery of a large amount of new tonnage, has been a noteworthy reduction in the average age of the world fleet.

The improvement in the average age of the U.K. fleet is rather better than that of the world as a whole. This has been particularly marked for tramps and tankers. The average age of foreign-going tramps owned and registered in this country fell from 8¾ years at June 1959 to less than 7½ years at June 1960. For the foreign-going tankers the corresponding reduction was from 8 years to less than 7½ years.

The melancholy feature of the year has been the continued erosion of the coasting and home trade fleet, particularly in tramp tonnage. In this section there was a reduction from 542 ships of 571,000 grt to 506 ships of 514,000 grt.

One of the more hopeful features of 1960 was a fall in the amount of shipping laid up for lack of employment. Increasing world trade, a slackening in the rate of delivery of new ships, and the breaking up of old tonnage have all contributed to this improvement. There was a continuous reduction in laid-up dry-cargo tonnage from nearly 3½ mn grt in December 1959 to about 1⅓ mn tons in December 1960 and, of this latter amount, over 95 per cent was of ships built during or before the war. The volume of laid-up tanker tonnage was also about 3½ mn tons in December 1959, but a fall in the early months of 1960 was followed by a rise to over 3¾ mn tons in July. Since then a continuous fall reduced the total to 2¼ mn tons in December.

Nuclear Power for Marine Propulsion

The possibility of putting into the water a British nuclear-powered merchant ship continues to attract widespread public interest. At the same time, reports from the United States indicate that American experts are having second thoughts about the rate of progress possible towards making the use of nuclear fuel in merchant ships commercially more attractive than that of conventional fuels.

One team of experts in a report prepared for the U.S. Maritime Administration stated: "We do not believe that nuclear power in the form that we know it today offers promise for large scale commercial exploitation by the U.S. merchant marine within the foreseeable future. The nuclear power programme, therefore, should be looked upon as a long range one." In this report at least ten years is suggested as the time required to make nuclear power commercially competitive. The experts went on to say: "Unless the immediate outlook for economic nuclear power for merchant ships improves unexpectedly we feel that the maritime administration should defer any decisions relative to construction of another nuclear ship until after the *Savannah* has been in operation long enough to furnish a sounder basis for the prediction of nuclear power economics and operational problems."

These views are in line with the way opinion has been crystallising in this country. Nevertheless, in anticipation of the possibility of nuclear power eventually becoming commercially attractive, and quite apart from any question of prestige value, the United Kingdom must be in the forefront of development.

Taxation

Now that there are some signs that shipping may be climbing out of the long depression through which it has been passing, the need for the Government to bring shipping taxation under review is becoming even more urgent. When conditions improve sufficiently for the shipping of the world once more to earn profits, the full force of competition from flags of convenience will again have to be met. In the industry's policy document, the Government was urged to reach an early decision on further taxation adjustments for British shipping.

The specific submission made to the Government was that the rate of investment allowance for shipping should be increased and stabilised as an aid to forward planning and that there was room for greater flexibility in the application of the allowance. It was, however, pointed out that even this would be of limited help to owners with a few ships and consequently with no continuous building programme. Reference was also made to the need for a more positive approach by the Government to the removal of obstacles which taxation puts in the way of the maintenance and development of the United Kingdom merchant fleet. Instances given included the balancing charge and the present irrational basis on which relief is given in respect of trade losses. Attention was also called to the quite anomalous position which exists regarding the operation of shipping companies in some parts of the Commonwealth. It is, for example, possible for an American owner to operate ships under the British flag through companies registered in the Commonwealth in circumstances denied to United Kingdom owners for whom such opportunities are limited in scope and are in practice confined to the operation of new shipping services.

A matter on which separate representations have been made is a particular taxation rule which has had the effect of preventing British shipowners from availing themselves of the opportunities which have occurred for the purchase from abroad of either a timecharter to an oil company or of a tanker with an unexpired timecharter.

NEWS FROM OVERSEAS

From THE SHIPPING WORLD'S Own Correspondents

Danish Credit Institution

A NEW credit institution has been founded in Copenhagen under the name of Danmarks Skibskreditfond. Founding members are the National Bank of Denmark, the Association of Danish Business Banks, Denmark's Shipowners' Association, the Association of Danish Steel Ship and Engine Builders, and the Danish Underwriters' Association, who have paid up a guarantee capital of Kr40 mn (£2 mn), while bonds of Kr400 mn (£20 mn) will be offered for sale to the public. The Skibskreditfond will be prepared to finance (a) construction of vessels for Danish owners by Danish or foreign yards, (b) construction of vessels for foreign owners by Danish yards, (c) purchase of Danish or foreign flag vessels not more than two years old for registry in Denmark, and (d) sale of Danish owned vessels to foreign buyers. Before the new institution can begin operations, special legislation is required. It is understood that the rate of interest of the new bonds will be 7 per cent p.a., and that repayment can be extended over ten years.

Orders for Larger Ships

REVIEWING the current shipbuilding situation, Dr William Scholtz, chairman of Deutsche Werft, Hamburg, has stated that there is an increase in the demand for ships again. He commented on the stronger trend towards the bigger tanker, as instanced by increases in size of tankers on order from 45,000 dwt to 77,000 dwt. In addition, several tankers already in service are to be increased in capacity to 45,000 tons with increase in length. The demand for large bulk carriers is also rising. According to Dr Scholtz the most popular sizes in this category are 16,000 dwt and 22/24,000 dwt for European trades, and 60,000, 80,000, or even 100,000 dwt for other routes. Reviewing export prospects, Dr. Scholtz stated that foreign customers generally are ready to place orders, but are not willing to bear any foreign exchange risks. In view of the long-term credits which were generally granted at present, a solution of the problem of foreign exchange risks was becoming more and more important for European shipbuilders.

Schlieker Werft in 1960

THE Schlieker industrial combine had a turnover of DM756 mn in 1960. The Schlieker combine comprises shipbuilding and shipping, production of electric sheet steel, iron, steel and coal, and other related industrial operations. It is the biggest industrial group owned and operated by a single individual in West Germany. Due to modern rationalisation and automation programmes installed at the Hamburg shipyard, Schlieker Werft has achieved a production output of 22 kilograms of steel per man per hour, compared to a conventional shipyard's output of 12-14 kg per man per hour. Last year Schlieker Werft delivered ten ships, totalling 210,994 dwt, compared with nine ships of 157,450 dwt in 1959. In the short space of six years, Schlieker Werft—which started, in the German expression, from "green meadows"—has become the third largest shipbuilder in West Germany in point of tonnage. As a result of its lower costs and shorter delivery time, Schlieker Werft obtained a contract from the American Telephone and Telegraph Company to build the largest cable-laying ship in the world against stiff competition from American, British and Japanese shipyards. This ship, which will cost approximately $2 mn, will have the most modern electronic and other equipment to permit the rapid laying and repair of deep-sea cables in both the Pacific and Atlantic oceans. This year Schlieker Werft will add a third floating dock to its shipbuilding and repair facilities.

In Brief

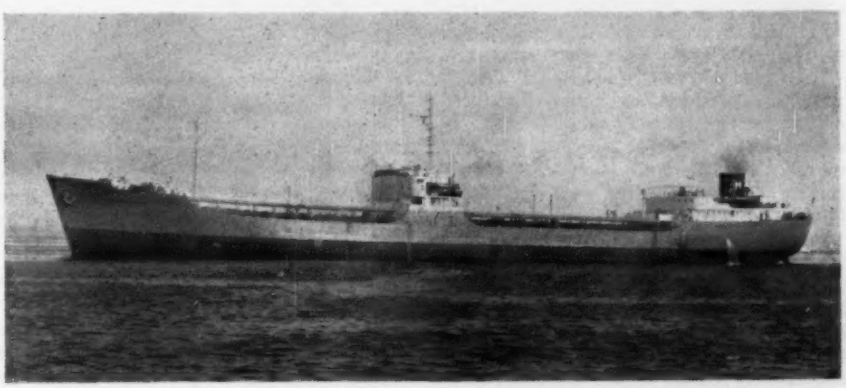
THE GOVERNMENT OF CEYLON paid out Rs.450,000 to foreign shipowners for delays caused to their ships in Colombo and Galle harbours last year. This is the lowest demurrage bill paid out by the Government in recent years. Demurrage payments totalled over Rs.10 mn in 1959. A Colombo port official said that delays to ships bringing food cargoes to Ceylon cost the country about Rs.700,000, but despatch money for the quick turnround amounted to Rs.250,000. He added that there was congestion in Colombo harbour for only a short period in 1960 and very few ships had to wait outside the harbour for suitable berthing facilities.

ACCORDING to the Bank of England & South America, the Spanish Ministry of Finance has issued an order authorising the Instituto de Crédito para la Reconstrucción Nacional to grant credits for shipbuilding amounting to 400 mn pesetas in 1962, in addition to the sum previously fixed, and amounting to 1,600 mn pesetas annually in the years 1963 to 1967. Credits will be granted up to 80 per cent of the value of the ship and will bear interest of 4 per cent; the terms will vary between 10 and 15 years.

THE Instytut Morski (Maritime Institute), Gdansk, has prepared a study of the characteristics of vessels operated in the principal liner services which link Western Europe with ports of other continents. In all the tonnage of 54 liner companies under 15 different flags is analysed. Tonnage aged under 5 years accounts for 27 per cent of the total, while 52 per cent is under 10 years old. Although the text is in Polish, English translations of the headings to the tables are provided.

CONVERSION TO ORE CARRIER

The motorship "Markland", owned by the Brostrom concern, has recently been handed back to her owners following conversion into an ore carrier at the Eriksbergs Mek. Verkstads A/B, Gothenburg. Originally built by Eriksbergs in 1952 as an 18,000-dwt tanker the vessel's deadweight has now been reduced to 17,500 tons. A double bottom has been built in between the two existing longitudinal bulkheads and five centre tank bulkheads and two coffer-dam bulkheads have been removed. Four ore cargo holds have been obtained with a total capacity of 375,260 cu ft



Oil Topics

CANADIAN EXTENSION OF PROHIBITED ZONE

THE Inter-Governmental Maritime Consultative Organisation (IMCO) has announced that the zone off the Atlantic Coast of Canada in which ships subject to the International Convention for the Prevention of Pollution of the Sea by Oil, 1954, are prohibited from discharging persistent oils will be extended from 50 to 100 miles from land, as from Saturday, February 25. The Government of Canada has taken steps to extend this zone because of the increasing reports of oil pollution on its Atlantic Coast. Prohibited zones generally include all sea areas of the world within 50 miles from land, and some specially designated areas extending beyond the 50-mile limit. Certain additional areas are prohibited for discharging from tankers. These prohibited zones are part of the measures for preventing pollution of the sea by oil discharged from ships laid down in the Convention which was signed in London on 12 May 1954. The Convention came into force on 26 July 1958; for the first three years the prohibited zones only apply as regards discharges from tankers, but on July 26 of this year they will also come into force for other ships. The Convention has so far been accepted by 12 countries: Belgium, Canada, Denmark, the Federal Republic of Germany, Finland, France, Ireland, Mexico, Netherlands, Norway, Sweden and the United Kingdom. Under the Convention any Government which has accepted its provisions can propose an extension of the zone off its coasts up to 100 miles by making a declaration. Unless another contracting government objects within four months, the extension comes into force six months after the declaration. The Government of Canada made such a declaration on 25 August 1960. It remains to be seen how effective this action by the Canadian Government will be. As the list of signatories given above does not include such important tanker-owning countries as the United States, Liberia, Panama and Greece, it is clear that observance of the convention can at best be partial. A better hope may be the wider use of the British-developed chemical Fomescol, which offers the prospect of making the retention of oil a commercial proposition.

Record U.K. Oil Exports

LAST year Britain earned more than ever before from exports of petroleum products refined in this country. A total of some 8,700,000 tons was shipped abroad (apart from quantities supplied as bunkers to ocean-going vessels), and was valued at over £104 mn as compared with £95 mn for 1959. In addition, further substantial sums were received in respect of exports of petrochemicals. While precise figures are not available, according to Petroleum Information Bureau, it is estimated that direct exports of these products in 1960 were worth £30 mn. This total does not include the petrochemical content of many finished products—detergents are an example—which were likewise sold abroad. So far as the main petroleum products are concerned, fuel oil figured first on the list in terms of tonnage. Exports of this product amounted to 3,166,000 tons, with those of gas oil standing at 2,295,000 tons. Motor spirit was also prominent, coming third on the list with 1,725,000 tons. Kerosine, lubricating oils and diesel oil together totalled just over 1,500,000 tons and accounted for almost all the remaining exports. Commenting on these returns, Petroleum Information Bureau pointed out that they illustrate a little known aspect of Britain's oil industry. Among the principal markets are many of the countries of Western Europe, particularly Scandinavia, which spent more than £48 mn on refined oils.

RECENT SHIP SALES

TWIN-SCREW passenger liner *Carthage* (14,283 grt, 7,409 nrt, built and engined Glasgow 1931 by A. Stephen & Sons Ltd) sold by P & O-Orient Lines, London, to Japanese shipbreakers with London delivery February. She is reported to have realised £167,500.

Cargo steamer *Clan Mackendrick* (ex-*Empire Pickwick*, 10,280 dwt, 7,054 grt, 4,270 nrt, built South Shields 1943 by J. Readhead & Sons Ltd) sold by Clan Line Steamers Ltd, London, to Mullion & Co Ltd, Hong Kong, and to be renamed *Ardpatrick*.

Cargo steamer *Clan Alpine* (ex-*Empire Barrie*, 10,170 dwt, 7,103 grt, built Sunderland 1942 by J. L. Thompson & Sons Ltd) sold by Clan Line Steamers Ltd, London, to Pakistani shipbreakers for about £60,000 as she lies aground near Chittagong where she was put ashore in a cyclone last October. She will be scrapped on the spot. She had previously been sold to Japanese shipbreakers and was en route for Japan to give delivery when she was grounded.

Cargo steamer *Chateau Lafite* (2,642 dwt, 2,203 grt, 1,061 nrt, built and engined Havre 1949 by Forges & Chantiers de la Mediterranee) sold by Worms & Cie., Paris, to Greek operators, reported to be a Liberian company, for $184,000 and renamed *Urania*.

Motor vessel *Canopus* (ex-*Lena H.*, ex-*Sortland*, 1,110 dwt, 759 grt, 377 nrt, built Monfalcone 1947 by Cantieri Riuniti dell' Adriatico) sold by N.V. Rotterdamsche Mij. voor Transport Overzee "Transshipping," Rotterdam, to Chr. Holst, Oslo, for about £50,000 and renamed *Normar*.

Twin-screw motor vessel *Wayli* (ex-*Santa Lucia*, ex-*North Star*, 2,870 grt, 1,000 nrt, built Jeffersonville 1943 by the Jeffersonville Boat & Machine Co) sold by Hafosa Shipping Corp. S.A., Panama, to the Cia. de Transportes Robin S.A., Panama, and renamed *Robina*.

Motor tanker *Valmar* (ex-*Velma*, 9,478 grt, 5,861 nrt, built Gothenburg 1930 by A/B Gotaverken) sold by N.D. Dao Division Occidental C.A., Maracaibo, to Spanish shipbreakers for demolition at Santander.

Cargo steamer *Mahout* (7,921 grt, 4,880 nrt, built Port Glasgow 1925 by William Hamilton & Co Ltd) sold by Thos. & Jno. Brocklebank Ltd, Liverpool, to BISCO, with delivery Blyth where she is to be scrapped by Hughes Bolckow Ltd.

Motor tanker *Naranio* (8,126 grt, 4,768 nrt, built Glasgow 1943 by Blythswood Shipbuilding Co Ltd) sold by Shell Tankers Ltd, London, to Belgian shipbreakers.

Motor tanker *Taria* (10,328 grt, 6,164 nrt, built Amsterdam 1939 by N.V. Nederl. Scheeps. Maats.) sold by N.V. Petroleum Maats. "La Corona" (Shell Tankers N.V.), The Hague, to the Hong Kong Chiap Hua Manufactory (1947) Ltd, for £110,000 for demolition at Hong Kong.

Motor vessel *Jaspis* (ex-*Neothauma*, 8,503 grt, 4,284 nrt, built Glasgow 1946 by Blythswood Shipbuilding Co Ltd, converted from tanker 1956) sold by Anders Jahre, Sandefjord, to Japanese shipbreakers for £88,000 with delivery Japan.

Motor vessel *Knoll* (ex-*Mirva*, ex-*Akabahra*, ex-*Fager*, 2,050 dwt, 1,143 grt, 649 nrt, built Trondheim 1916 by Trondhjems Mek. Verks.) sold by Flakkes Rederi A/S, Kristiansand, to other Norwegian buyers for £35,000.

Cargo steamer *Nova* (ex-*Carbonia*, ex-*Ardennia*, ex-*Gothia*, ex-*Rozen*, 3,120 dwt, 1,947 grt, 1,146 nrt, built and engined Gothenburg 1916 by Lindholmens Varv Akt.) sold by Rederi S.A., Panama, and renamed *Ivar*.

Motor coaster *Sigyn* (ex-*Aegir*, 560 dwt, 395 grt, 114 nrt, built Groningen 1939 by J. Koster Hzn. Schpsw. "Gideon") sold by Rederi A/B Staffan (J. Haag), Gavle, to a Greek buyer reported to be Mr Melissakis, and renamed *Costis*.

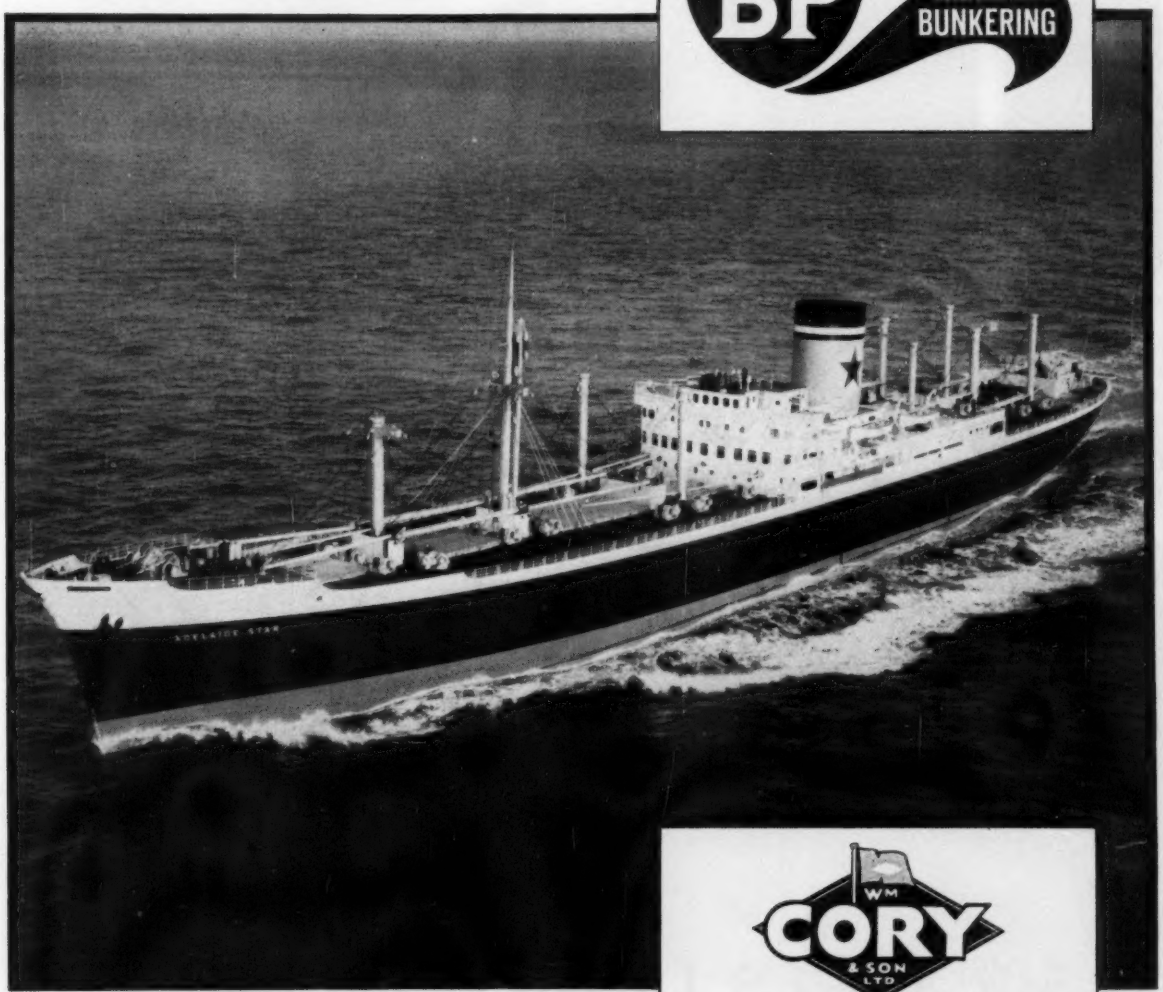
Cargo steamer *Malabar* (ex-*Samdee*, launched as *Patrick H. Morrissey*, 10,740 dwt, 7,280 grt, 4,440 nrt, built Brunswick, Ga., 1943 by J. A. Jones Construction Co Inc) sold by Thos. & Jno. Brocklebank Ltd, Liverpool, to Greek buyers for what is reported as about £95,000 with end-February delivery Antwerp.

Cargo steamer *Vangelistria* (ex-*Karen*, 1,925 dwt, 1,293 grt, 733 nrt, built Copenhagen 1917 by Kjobenhavens Jernsk. &

(*Continued on page 222*)

OIL POWER FOR SHIPS

BP INTERNATIONAL BUNKERING



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NEW FROM THE WEAR

Vessel: m.t. "MONTANA"

Description: The "Montana" is an Oil Tanker built by Sir James Laing & Sons Ltd. for A/S Tanktransport (Thorvald Berg) Tonsberg, Norway.

The vessel has a deadweight of 20,140 tons. The longitudinal and transverse corrugated type bulkheads divide the cargo compartments into 26 separate cargo tanks. Propelling machinery consists of a six cylinder Doxford turbo charged oil engine. It is of particular interest being the first of the new 'P' range recently developed.

SIR JAMES LAING & SONS LTD

DEPTFORD YARD · SUNDERLAND

Oil Tanker "Montana"

FIRST SHIP WITH NEW DOXFORD "P" TYPE ENGINE

THE FIRST vessel to be powered by the new Doxford "P" type oil engine has been delivered to her owners after completing successful sea trials. This vessel, the *Montana*, is an oil tanker of 20,000 dwt built by Sir James Laing & Sons Ltd, Sunderland, and is owned by A/S Tanktransport (Thorvald Berg), Tonsberg, Norway. Built on attractive lines with a long sweep up to the forecastle, she has the unusual feature of a low structure in the place amidships normally occupied by the bridge, and used mainly for storage. Having this closed structure amidships enables a greater deadweight to be carried. The vessel is equipped with a patent tank cleaning system which has already proved highly satisfactory in another of the owner's ships, the *Morgenen*. The consulting engineers for the contract were Arnesen, Christensen & Smith, and the construction of hull and machinery was personally supervised by their Newcastle director, Mr E. K. Riple.

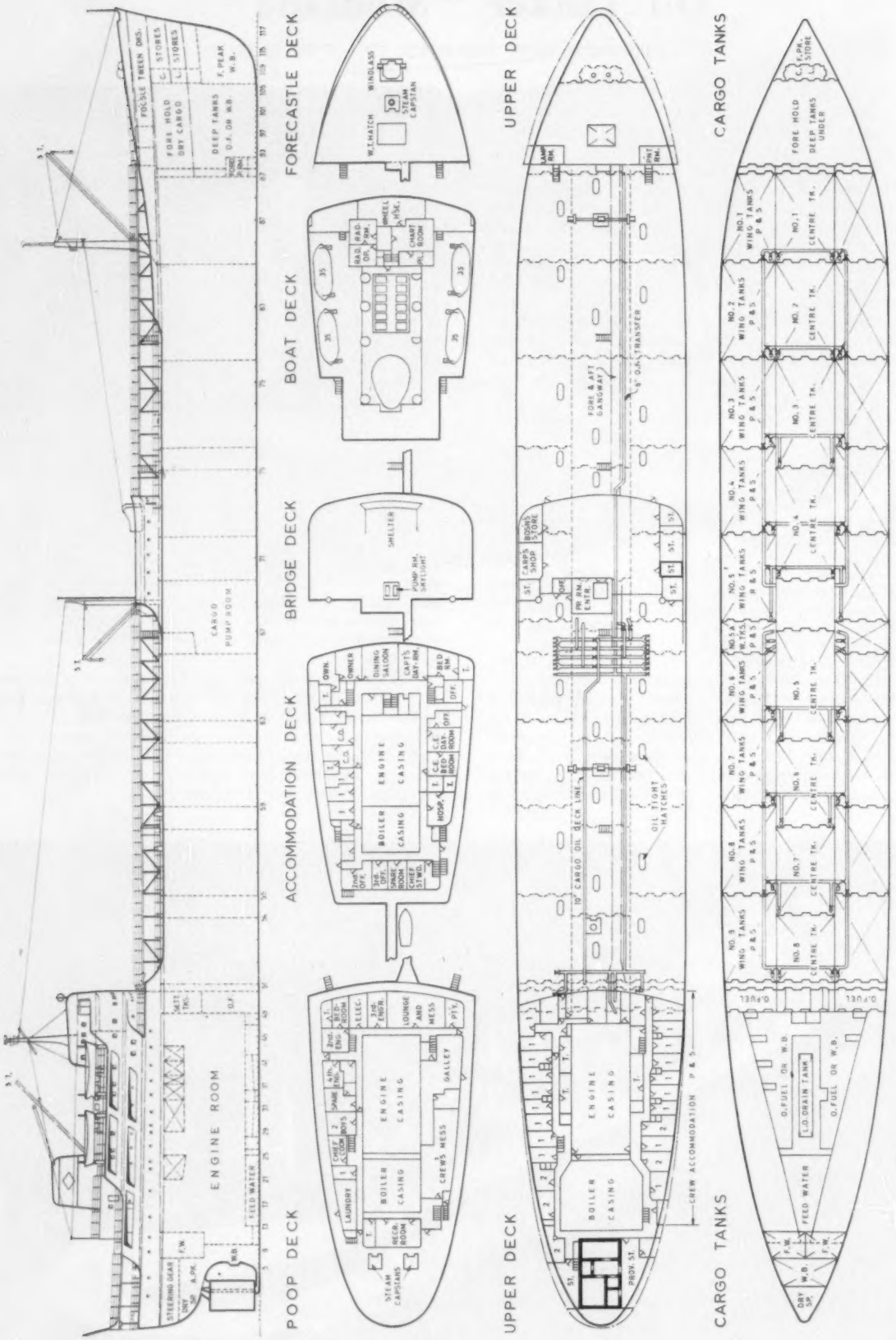
The principal particulars of the *Montana* are as follows:

Length o.a.	559ft 9in
Length b.p.	534ft 11½in
Breadth, moulded	71ft 10½in
Breadth, extreme	72ft
Depth, moulded to upper deck	40ft
Sheer forward	7ft
Height of centrecastle	7ft 9in
Draught	31ft 1½in
Deadweight	20,000 dwt
Machinery output (max)	10,800 bhp
Corresponding engine speed	124 rpm
Machinery output (service)	8,700 bhp
Corresponding engine speed	116 rpm
Service speed (approx)	14¾ knots

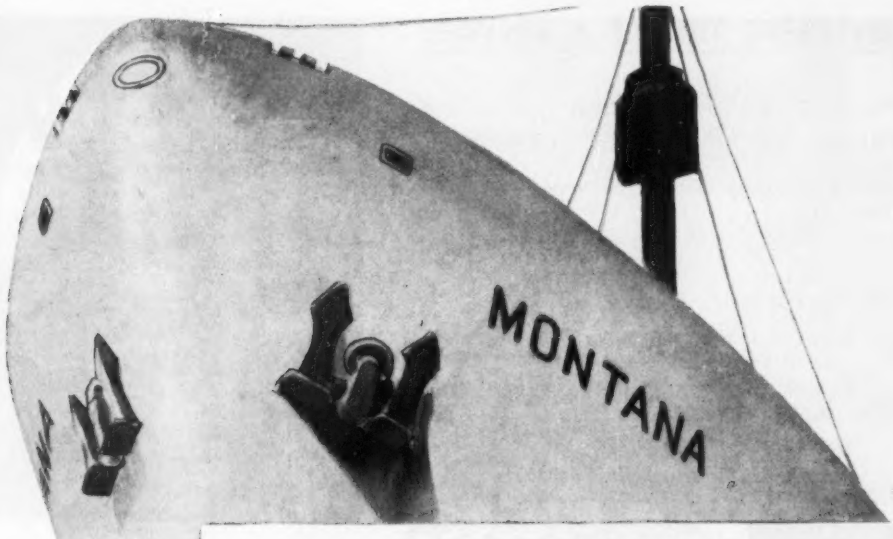
The propelling machinery consists of a Doxford "P" type turbocharged oil engine having six cylinders and a service output of 8,700 bhp. The engine was seen on test last summer and was described in THE SHIPPING WORLD of 6 July 1960. To date there are 28 of these new-type Doxford engines on order and all, with the exception of one for the cargo vessel *St Rosario* which is building for the South America Saint Line, will be turbocharged. During a short sea trial off the North East Coast the engine was run at various speeds, and although it is difficult to assess the operation of an engine in so short a period it did give the impression that it was a very flexible and smooth-running unit. Certainly it is a vast improvement on the earlier type of engine, as those who sailed in the early days of Doxford-engined ships will agree.

View of the wheelhouse. Navigational aids include Raytheon radar, AEG steering and course recorder by C. Plath

It is of interest to note that the *Montana* is the third of three oil tankers of similar size and deadweight built by Sir James Laing & Sons during the past 2½ years, all powered by Doxford oil engines, but of different sizes. The first vessel, the *Thirlby*, has a six-cylinder engine with cylinders of 650mm bore and a combined piston stroke of 2,320mm and with a service rating of 9,000 bhp at



General arrangement of the oil tanker "Montana," 20,000 dwt, built by Sir James Laing & Sons Ltd, Sunderland, for A/S Tanktransport (Thorvald Berg), Tonsberg



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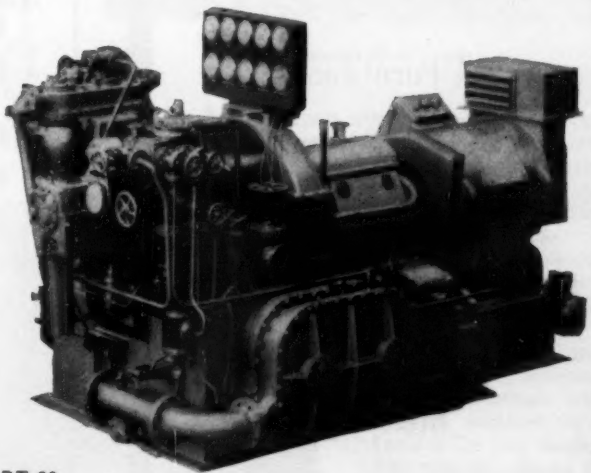
is generated by a Brotherhood 300kW A.C. Self-contained steam Turbo-Alternating Set. A 'Spanner' waste heat boiler using exhaust gases from the main NEW DOXFORD 67 PT6 ENGINE supplies the steam for the set.

Owners:
A/S Tanktransport,
Tonsberg, Norway.

Shipbuilders:
Sir James Laing
& Sons Ltd.,
Sunderland.

Engine-Builders:
Wm. Doxford &
Sons (Engineers)
Ltd., Sunderland.



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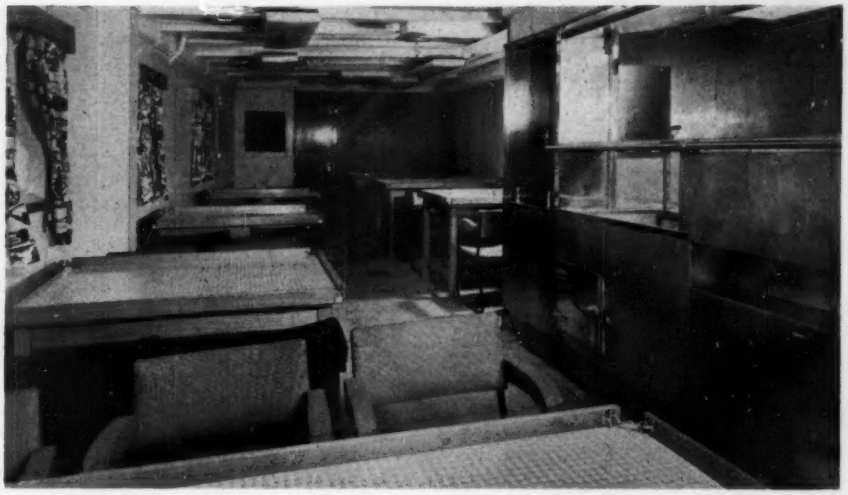
115 rpm. The service speed of this vessel is 14¼ knots on about 24 tons of fuel per day. The second ship, the *Corhampton*, is powered by a six-cylinder Doxford engine with cylinders of 700mm bore and a combined piston stroke of 2,320mm. The service output of this engine, which was the first Doxford engine to be built from the start without scavenge pumps (*SW*, 4.11.59), is 9,500 bhp and the service speed 14½ knots.



The crew's mess room. Service is on the cafeteria system

The *Montana* has been built on the longitudinal system throughout the cargo spaces and engine room with transverse framing in the fore and after peaks. She is mainly of welded construction. The cargo compartments are divided by two longitudinal bulkheads and nine transverse bulkheads to form eight centre and eighteen side tanks. In Nos 5 port and starboard wing tanks there is an additional compartment which is used for the cargo cleaning system. The main pumproom is located between Nos 4 and 5 centre tanks, and a small ballast pumproom is arranged forward.

The main cargo pumps are of Eureka manufacture and are of the vertical duplex compound steam-driven type. The pumps are 16in by 26in by 16in by 24in, each having a capacity of 510 tons/hour (water). They are made by A/S Eureka Mek. Verksted, Oslo, and the first installation of this type of pump to be carried out in the United Kingdom was in the Norwegian tanker *Polarprins* (*SW*, 26.5.54). Details of the pump were given at that time. There is also one Eureka vertical duplex stripping pump of about 100 tons/hour capacity.

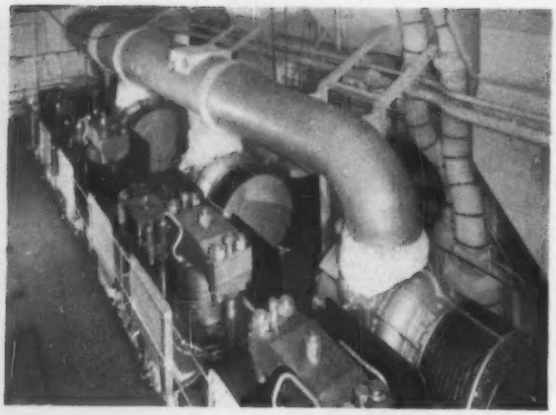
A ring main system of 12-in diameter cargo piping with crossover pipes of the same diameter links each tank with the pump room. Each centre tank has two 10-in suction bends with strums while the wing tanks have one 10-in bend and strum per tank. Master sluice valves have been fitted at every athwartship bulkhead and also in the crossovers, together with a sluice valve at each suction strum. Steels' system of "Alagrid" heating coils has been fitted throughout the cargo tanks.

The second officer's room

The captain's dining saloon

Steam-driven deck machinery includes an anchor windlass supplied by A/S Pusnes Mek. Verk.; and two horizontal cargo and mooring winches, three enclosed-type mooring capstans and one capstan supplied by John Lynn & Co Ltd, Sunderland. The winches, placed one in the forward well and one in the after well, are both provided with portable extended ends for mooring purposes and also serve the derricks.

Navigational aids include Raytheon model 1602 radar, SAL log, a D/F set supplied by C. Plath GmbH, Ham-



Top of the Doxford P-type engine showing upper piston yokes and turbochargers

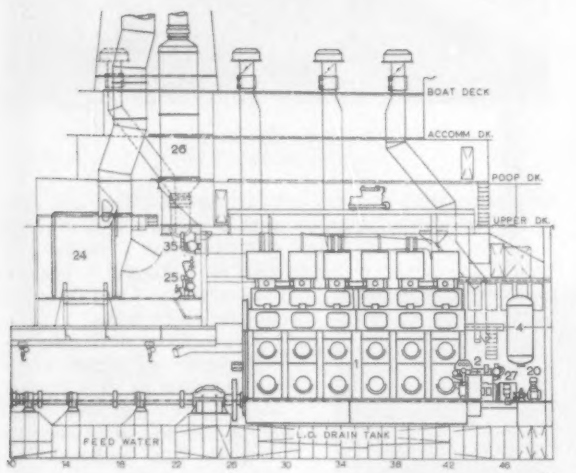
burg, SIMRA echosounder, AEG steering and gyro course recorder by C. Plath, and Chadburn telegraphs. The steering gear has been supplied by Donkin & Co Ltd, and is of their electro-hydraulic four-ram type with swashplate-type delivery pumps. It is believed that this is the first Donkin steering gear to work in conjunction with AEG steering and Plath gyro compass.

The accommodation is aft and has been most attractively laid out with extensive use of wood veneers, laminated plastics and Vynide material. The owner's, captain's, chief officer's, and chief engineer's suites are located on the accommodation deck. Below on the poop deck there is a large galley which serves both the officers' and crew's mess rooms; the latter being fitted with a cafeteria unit supplied by Ski Mek. Verk. A recreation room for the crew and a well-equipped laundry are also located on this deck.

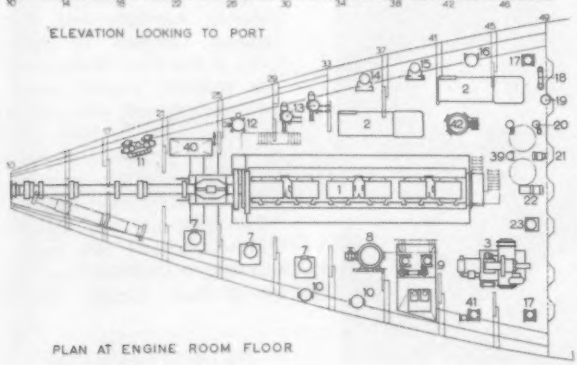
The accommodation is heated, ventilated and air-conditioned by the first installation of the Norris Warming Co's new high-velocity single-trunk system. (*SW*, 6.1.60.) To provide the conditioned air, two units are fitted to the boat deck, serving the port and starboard sides of the vessel. Each of these units is self contained, incorporating refrigerating machinery, cooling and heating coils and is interconnected to high-efficiency fans which are constructed of heavy gauge aluminium alloy, to save weight and reduce corrosion. These fans distribute air to the accommodation at high velocity, via specially designed circular section trunking, considerably smaller than conventional trunks, which terminates in the various spaces in attenuators which reduce the air speed and noise before passing the air to the diffusers. These air diffusers are so designed as to induce a high rate of entrainment of the air in the spaces served, thus allowing a greater temperature differential between the inlet air to the cabins and the internal cabin temperatures without unpleasant draughts.

As stated, the propelling machinery in the *Montana* consists of a Doxford diaphragm-type oil engine of the 67PT6 type with oil-cooled lower pistons. The engine is turbocharged and is fitted with three Brown Boveri type VTR 630 exhaust gas turbochargers. It has six cylinders of 670mm bore and a combined piston stroke of 2,100mm. The maximum output rating is 10,800 bhp at 124 rpm, and the service rating 8,700 bhp at 116 rpm. During sea trials a speed of 16.028 knots was reached at 9,683 bhp and 120.65 rpm.

The cylinder liners are in two pieces, of special cast iron, and are chrome-hardened; it is understood that some of the liners have been processed by Van der Horst, Holland, and some by British Van der Horst Ltd.



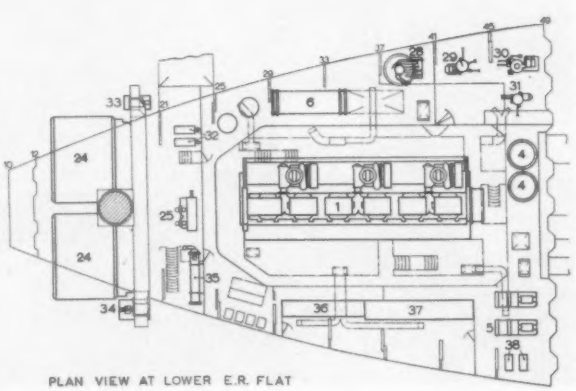
ELEVATION LOOKING TO PORT



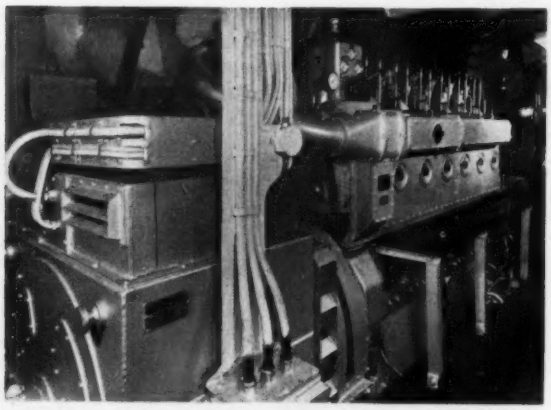
PLAN AT ENGINE ROOM FLOOR

Machinery arrangement

1 Doxford engine
2 300-kW diesel alternator
3 300-kW turbo-alternator
4 Air storage tanks
5 Main air compressor
6 Aux. condenser
7 Lub. oil pumps
8 Lub. oil cooler
9 Jacket water tank and pumps
10 Lub. oil discharge strainers
11 Boiler feed pumps
12 Condenser air pump
13 Lub. oil purifier
14 Bilge pump
15 Gen. service pump
16 Cond. S.W. circulating pump
17 S.W. circulating pump
18 Alternator F.W. cooler
19 Alternator air receiver
20 Alternator S.W. pump
21 Emergency air compressor
22 Diesel oil transfer pump
23 Heavy oil transfer pump
24 Scotch boiler
25 Oil burning unit
26 Spanner boiler
27 Alternator F.W. circ. pump
28 Oily water separator
29 Heavy oil purifier
30 Heavy oil purifier
31 Diesel oil purifier
32 Spanner boiler feed pumps
33 Forced draught fan (steam)
34 Forced draught fan (electric)
35 Feed heater
36 Group starter section
37 Main switchboard
38 F.W. plant extr. and cond. pumps
39 Alternator jacket water pump
40 Feed filter and float control tk.
41 Ballast pump
42 Jacket water cooler



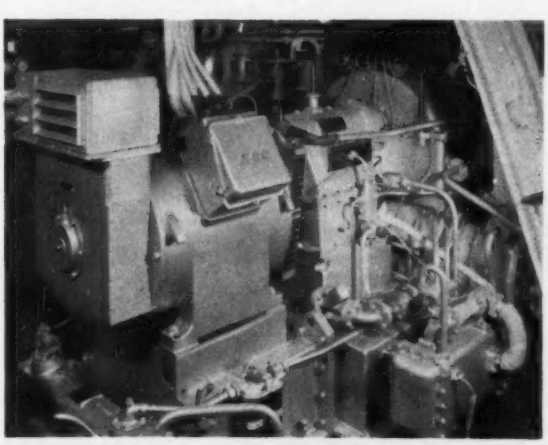
PLAN VIEW AT LOWER E.R. FLAT



One of the Bergen diesel-driven G.E.C. alternator sets

The lubricants selected for the *Montana* main engine are Castrol marine oils. A number of lubricants were tested, Castrol marine oils eventually being selected. Following testbed experiments with combinations of various types of piston rings and liners, chrome-hardened liners (as reported above) are now fitted to allow further comparative tests to be made at sea. In conjunction with the testing of the Van de Horst chrome plated liners, we understand research is also being conducted into the economic value of the Van der Horst Seven Star additive and emulsifying agent, a special mixing plant and storage tanks being installed for this purpose. Loxham cylinder lubricators are used.

Two diesel-driven alternators and one steam turbo-driven alternator have been installed, supplying electricity at 440 volts, 3 phase, 60 cycles. The two diesel sets consist of six-cylinder turbocharged four-stroke type RTG6 465-hp diesel engines built by A/S Bergens Mek. Verk., direct coupled to G.E.C. 350-kW alternators running at 514 rpm. The steam turbo-alternator, supplied by Peter Brotherhood Ltd, consists of a multistage turbine, with integral condenser and circulating water and extraction pumps, running at a speed of 8,500 rpm and connected through a Wellman-Bibby flexible coupling and reduction gearing to a G.E.C. 300-kW alternator. This set is designed to operate on steam obtained from the main engine waste heat gas boiler when the ship is running under normal conditions at sea, and operates at a working pressure of 150 lb/sq in.



The turbo-alternator. The G.E.C. 300-kW alternator is driven through reduction gearing by a Peter Brotherhood steam turbine

So far as mechanical details are concerned the turbine follows the latest practice, but it is characterised by the large number of stages for the relatively small heat drop available, compared with conventional high-pressure turbo-generators, and the moderate degree of reaction carried in the last few stages. In general, these features reduce the steam efflux and water impingement velocities and, together with special internal drainage arrangements, reduce blade erosion to a minimum. The overall efficiency of the installation is further improved by arrangements made for bleeding quantities of low pressure steam from the early stages of the turbine for ship's heating.

All three alternators are arranged for parallel operation. A feature of the alternators is that all excitation and voltage regulator components are completely static. With the exception of the main field rectifiers, which are located in the cooling air stream of the alternators, the components are mounted in the supply section of the switchboard. The combined main and group starter switchboard has also been supplied by the General Electric Co Ltd. Provision has been made for feeding a bank of 30-kVA transformers, a 440-volts sub-switchboard and three engineroom auxiliary circuits.

Steam for cargo pumping etc is obtained from two Scotch boilers with Deighton section furnaces fitted with Wallsend-Howden fronts arranged for oil burning. There is also a Spanner "Swirlyflo" upflow exhaust gas waste heat boiler designed for a working pressure of 180 lb/sq in. This boiler has been arranged to work in conjunction with the oil-fired boilers, and acts as a silencer.

PATENT TANK CLEANING SYSTEM

THE Norwegian oil tanker *Montana* has been fitted with a patent tank cleaning system, using fresh hot water from an independent pump and water heater fitted in the cargo pump room amidships. Two small wing tanks, Nos 5a port and starboard, are set aside for this system. The port tank is fitted with a sludge collecting and disposal unit which collects the oily sludge through the main tank lines while the tanks are being washed down. The oil is then separated together with the heavy impurities from the water, thus allowing the water to be pumped back to the starboard tank and used over and over again. When the sludge has been removed from the tanks it is discharged hydraulically overboard once the ship is clear of coastal waters.

The system, which was installed in the oil tanker *Morgenen*, built in 1955 by Laings for the same owners as the *Montana*, is working excellently in this vessel and there is seldom more than a film of oil on top of the starboard tank after all the cargo tanks have been cleaned out. To-date the *Morgenen* has done all her drydocking in the Tyne after discharging on the Continent or at a U.K. port. The cleaning has been started as soon as ballasting was finished, and was usually completed when arriving at the free zone in the North Sea, where a few hours was sufficient to discharge the slops and clean the remaining port tank. The ship has always been accepted on arrival.

After a period of 5½ years in the dirty oil trade the *Morgenen* was recently cleaned so that she could carry grain. Work began on the way from Swansea to the free zone in the North Sea, where the heavy slops were discharged without any delay and without stopping the ship. She then proceeded to Haugesund where the cleaning was completed while lying alongside the quay in the middle of the town. The procedure required several washings down with hot water, and the owners state that without the use of this system the work could not have been done unless the ship had gone out to sea to discharge the slops and water.

Large Kockum-M.A.N. Diesel Engine

TWELVE-CYLINDER ENGINE FOR 40,000-DWT OIL TANKER

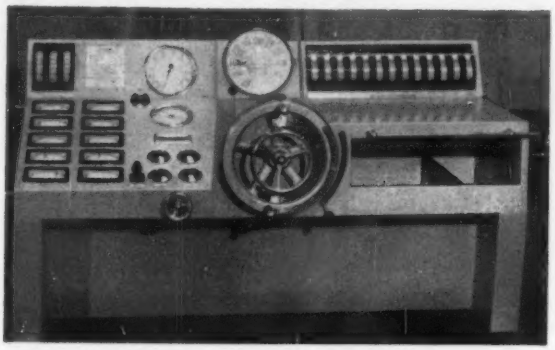
THE TANKER *Atalante*, 40,500 dwt, now under construction at Kockums Mekaniska Verkstads A/B, Malmö, for Norwegian owners, is to be powered by the largest Kockum-M.A.N. diesel engine yet built. This engine, which is a 12-cylinder two-stroke single-acting turbocharged engine of 780mm bore and 1,550mm stroke, has an output of about 16,200 bhp at 115 rpm. Designated type K 12 Z 78/155 this engine has been developed from the KZ 78/140 type engine, the piston stroke being increased by 150mm, and the entire design revised and strengthened so as to allow a high degree of turbocharging. Improvements based on the wide experience of Kockums and those of various Scandinavian shipowners have been included. The *Atalante* is due for delivery in the spring of this year.

Eight vessels of the same size as the *Atalante* have been built by Kockums, but they have so far all been powered by steam turbines. The contract speed for the new ship is 17 knots fully laden. When completed the *Atalante* will have a main engine manoeuvring console designed by Kockums installed on a platform in the engine room on a level with the camshaft. It is unusual for a large diesel engine to have this type of control, although remote control is often used with small diesel engine installations.

At maximum continuous output, 16,200 bhp at 115 rpm, the fuel consumption obtained from the accompanying test bed result curves is about 0.334 lb/bhp-hr. As will be noted, this figure has been extrapolated from the fuel consumption curve, as have, in point of fact, all readings taken above an output of 14,500 bhp. The bmep is about 112.8 lb/sq in. Test bed trials were carried out for a period of 82 hours. Caltex diesel fuel having a calorific value of 18,540 BTU/lb was used.

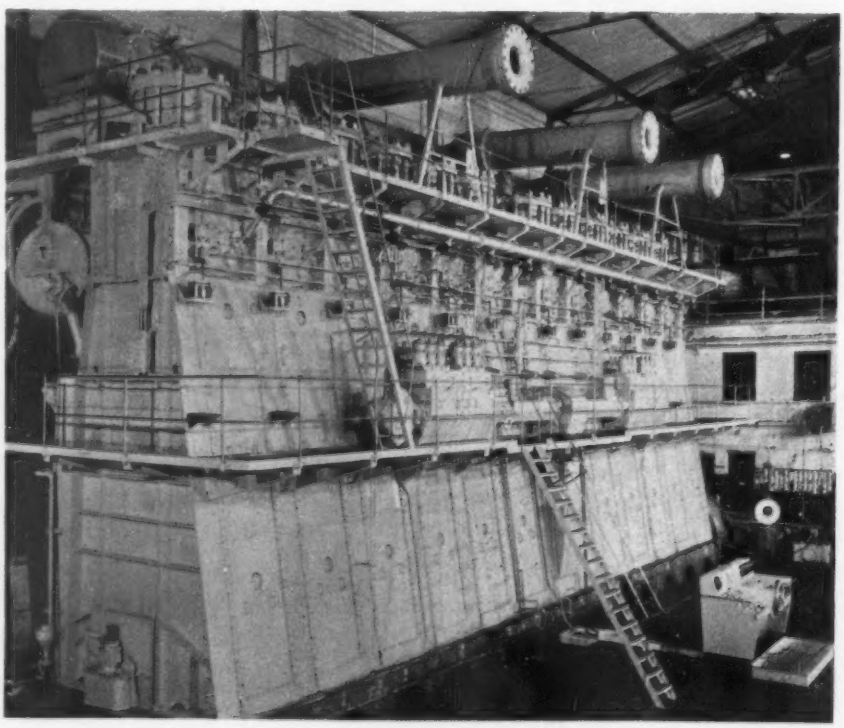
The engine has a comparatively wide bedplate which is welded and provided with cross girders of cast steel. The upper portion of the frame structure consists of a continuous intermediate box-shaped girder, on top of which are mounted the cylinder jackets. The girder increases considerably the engine rigidity. The frames between the bedplate and the intermediate girder are also welded. The engine is bolted together with continuous tie-rods running from the underside of the main bearing girders to the top of the cylinder jackets.

In common with all other M.A.N. engines the K 12 Z 78/155 engine employs the loop scavenging system. This system completely dispenses with moving exhaust-gas valves or revolving exhaust-gas slides with associated driving gear, enabling the cylinder to be fitted with only one fuel injection valve placed in the centre of the cover. To facilitate cylinder maintenance, the cooling water connections between the cylinder jackets and the cylinder tops, as well as a section of each cooling water outlet, have been made flexible by fitting perbunan-rubber tubes.



The manoeuvring and control console for the main engine. In the ship this will be installed at middle platform level

Turbocharging is effected on the "impulse-parallel" system with separate exhaust-gas pipes from each cylinder direct to the turbine side of the four turboblowers, which are of the Brown Boveri VTR 630 type. Kockum-built M.A.N. engines are usually pressurised on the "series-parallel" system using all piston undersides. A few of the undersides work in parallel and the remainder in series with the blowers. At normal engine speed the series undersides are idling, but at very low speed, when the exhaust-gas energy is low, these series undersides ensure a satisfactory amount of air for smoke-free combustion.



Kockums-M.A.N. type K12Z 78/155 diesel engine. Output, 16,200 bhp at 115 rpm and 35 per cent turbocharging

The piston undersides also serve as an alternative to the turboblowers, allowing the engine to be operated at about 75 per cent of the normal speed without the blowers.

As the 12-cylinder engines are provided with four blowers, no reserve for these is required since there always is enough air for running the engine at moderate speed. Consequently, the series undersides are not required as a reserve for the blowers. Therefore, in this case, only three piston undersides, Nos 4, 5 and 6 cylinders, have been employed as scavenging pumps, working in parallel with the blowers. The other undersides have been joined up into three separate triple groups. These are closed but are in communication with the scavenging air system, the pressure of which minimises the lubricating oil losses through the piston-rod stuffing boxes. Where 12-cylinder engines are concerned, this piston underside arrangement eliminates no less than 72 scavenging air valves, which otherwise would be fitted on the piston undersides. At very low rpm, additional scavenging air is supplied by a small electrically-driven blower of 20 hp, which starts and stops automatically depending on the position of the manoeuvring handwheel.

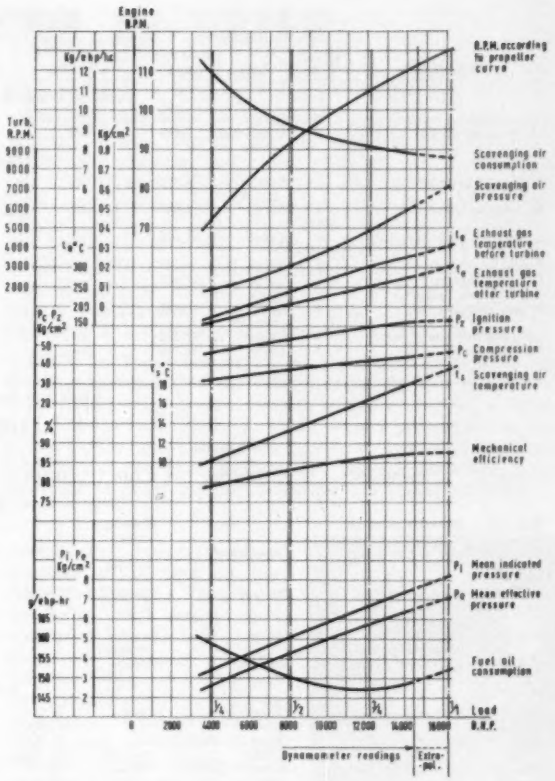
Remote Control Console

An interesting feature of the engine is the novel Kockum design of manoeuvring console which contains all the main engine manoeuvring and control instruments and also serves as a writing desk for the engineers. If necessary it can be placed in a soundproof compartment. In the *Atalante* the console will be centrally located on a platform at camshaft level. In addition the auxiliary engines and the main switchboard will be fitted there, so that the entire machinery will be easily supervised from the control position.

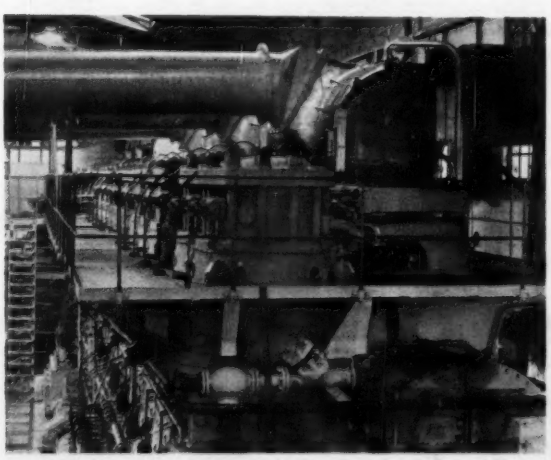
In the middle of the console there are two handwheels, one large and one small, mounted vertically. The larger one regulates the starting, stopping and reversing manoeuvres and the engine speed. The smaller is used for the acknowledging of orders received by the engine-room telegraph. It is also provided with mechanical safety gear preventing errors in manoeuvring. To the right of the handwheel is the auxiliary starting lever, by means of which additional starting air can be admitted, should the engine not fire properly on the first attempt. The reversing cock lever, which determines the lateral movement of the camshaft, is centrally placed on the top of the console.

On the right side of the console there are 13 exhaust-gas thermometers, one for each cylinder and one for the common exhaust-gas uptake after the turbines. The right hand side also serves as a writing desk. The left side is occupied by control instruments. These include three remote-reading thermometers for observing the cylinder and piston cooling water temperature, and the lubricating oil temperature; ten gauges showing the cooling water pressure in the cylinders and pistons, in the fuel and lubricating oil systems as well as in the scavenging and starting air systems; four tachometers showing the speed of the turboblowers and a direction indicator, a main tachometer and a revolution counter.

On the left-hand front side of the console there is a small handwheel for setting the overspeed governor, and nearby on the top there is an electric switch for the auxiliary scavenging air blower, which normally functions automatically, but can also be started and stopped by hand. Movement of the handwheel is transmitted to the fuel injection pumps by means of a rod provided with a cardan shaft consisting of two joints and a telescopic extension section. A Flexball transmission is employed for the mechanism that interlocks the handwheel while the engine is being reversed. The Flexball system consists essentially of a flat strip which runs between ball bearings in the centre of a flexible, plastic-covered metal tube, the whole somewhat resembling in principle a Bowden wire drive. It is designed to transmit 1,000 kg in tension and 600 kg in compression at distances up to about 65ft.



Curves showing operating values up to 14,500 bhp



Engine top showing the Brown Boveri turbochargers, three of which are arranged for temporary air consumption control apparatus

A BROCHURE from Bennis Thermoflash Ltd, Little Hulton, Walkden, Manchester, gives details of their water distillation plant; so valuable in arid countries for converting sea water into high-quality drinking water and for use on board ship. Steam-operated marine units with outputs from 10 to 150 tons per 24-hours day are available. There is also a "Flashwater" marine unit designed for diesel-driven ships using waste heat.

NEW CONTRACTS

Shipowners	No. of Ships	Type	Tons d.w. (gross)	Dimensions (ft.) L.b.p.(o.a.) × B × D.(dft.)	Delivery	Speed (knots)	Propelling Machinery	Total h.p.	Engine Builders	Shipbuilders
Yards in Great Britain and Northern Ireland										
James Fisher & Sons	1	Cargo	2,370	241 × 38.9 × 19.42	—	—	8-cyl diesel	1,800	Deutz	Burntisland S.B. Co
Clyde Shipping Co	1	Cargo and cattle	1,600	270	1962	—	Diesel	2,300	Nohab	Chas. Connell & Co
Overseas Yards										
Yngvar Hvistendahl, Tonsberg	1	Bulk carrier	16,800	—	1962	—	—	—	—	Rheinstahl Nordseewerke
Norwegian owners	1 (122)	Cargo	4,000	—	—	12	Diesel	2,160	M.A.N.	Paul Lindenau
J. P. Pedersen & Son, Oslo	1 (511)	Cargo	15,000	—	1963	—	Diesel	—	—	Nederlandsche Dok
Panamanian owners	2	Cargo	4,500	(330) × 48 × 27.58	—	—	Diesel	4,200	—	Scheepswerf "De Hoop"
Cia. Nacional de Navegacao, Lisbon	†1	Cargo pass	11,900	—	1963	—	Diesel	—	N.D.S.M.	Nederlandsche Dok
Triton Shipping Co	2	Bulk carrier	44,000	—	1962	—	Geared turbine	20,250	—	Kawasaki Dockyard
Uruguay Defense Ministry	1	Tanker	28,000	—	—	—	—	—	—	Ishikawajima-Harima H.I.
Hellenic Lines	2	Cargo	10,700	—	1962	—	M.A.N. diesel	7,400	Mitsubishi Yokohama	Kure S.B. & E. Co

† Hull to be built at a Portuguese Shipyard

LAUNCHES

Date	Shipowners	Ship's Name and/or Yard No.	Type	Tons d.w. (gross)	Dimensions (ft.) L.b.p.(o.a.) × B. × D.(dft.)	Speed (knots)	Propelling Machinery	Total h.p.	Engine Builders	Shipbuilders
Yards in Great Britain and Norther Ireland										
Feb. 13	Crown Agents for Nigeria	—	Floating dock	—	400	—	—	—	—	Swan Hunter, Wallsend
Feb. 15	Lyle Shipping Co	*Cape Nelson*	Ore carrier	16,500	498(525) × 70 × 36.5 (27.5)	12	H & W/ B & W diesel	4,510	J. G. Kincaid	Lithgows
Feb. 16	Burwood Fishing Co	*Burwood*	Trawler	(250)	—	—	Diesel	—	Mirrlees Bickerton & Day	T. Mitchison
Feb. 16	Calcutta Port Commissioners	*Churni*	Suction dredger	4,700	350 × 62 × 14	—	Steam recip.	4,350	Shipbuilders	Simons-Lobnitz
Feb. 20	Aberdeen owners	*Dandara*	Trawler	—.	73	—	Diesel	—	—	Berwick Shipyard
Overseas Yards										
Jan. 14	Elnavel Inc.	*Captain John L* (166)	Cargo	20,000 (13,800)	545 × 74.67 × 44(30)	17.25	B & W diesel	9,100	Mitsui S.B. & E. Co	Nippon Steel & Tube Co, Shimizu
Jan. 17	Kawasaki Kisen	*Chiyokawa Maru* (1000)	Ore carrier	21,000 (13,500)	537.95 × 74.1 × 41	16	6-cyl M.A.N. diesel	7,500	Shipbuilders	Kawasaki Dock
Jan. 20	Transoceanic Shipping Corp	*Denmark Getty* (1500)	Tanker	46,000 (27,400)	698.9 × 100 × (37.2)	16	Geared turbine	17,600	Shipbuilders	Mitsubishi S.B. & E. Co, Nagasaki
Jan. 20	Nakamura Kisen	*Unkai Maru No 3* (152)	Cargo	5,500 (3,600)	—	11.75	Diesel	2,450	Shipbuilders	Mitsubishi S.B. & E. Co, Hiroshima
Jan. 28	Standard Tankers (Bahamas)	*Esso Norway* (934)	Tanker	46,000 (31,700)	705 × 102 × 50	17.5	Geared turbine	19,000	Shipbuilders	Howaldtswerke
Jan. 28	Nippon Yusen Kaisha	*Fuyo Maru* (801)	Ore carrier	21,300 (14,200)	—	13.5	M.A.N. diesel	7,000	Mitsubishi	Ishikawajima-Harima H.I., Tokyo
Jan. 28	Polish Ocean Lines	*Szymanowski* (168)	Cargo	12,800 (9,100)	460.5 × 61.58 × (29 5)	14.25	Diesel	6,000	Fiat	Brodogradiliste Split
Jan. 30	Rethymis & Kulukundis	*Canopus* (374)	Cargo	14,440 (10,494)	480 × 64 × 41.9(27.5)	16	Diesel	7,000	Gebr. Stork	Werf Gusto
Jan. 30	National Development Corp.	*Philippine President Garcia* (769)	Cargo	11,500 (9,500)	475.67 × 63.67 × 41 (30.95)	18.25	Sulzer diesel	12,000	Shipbuilders	Uraga Dock
Jan. 31	Kokko Kaiun	*Fusashima Maru No 2* (3907)	Cargo	6,800 (4,450)	—	12.8	B & W diesel	3,450	Shipbuilders	Hitachi S.B. & E. Co, Mukaishima
Jan. 31	Trelleborgs Angfartygs	*Lake Ontario* (180)	Refrig. cargo	8,000 (8,300)	450(492) × 64 × 39.5 (28)	19.5	9-cyl diesel	10,900	Gotaverken	Oresundsvarvet
Jan. 31	Transocean Transport Corp., Philippines	*Transocean Shipper* (3870)	Cargo	12,853 (8,650)	452.58 × 61.58 × (29)	17.4	B & W diesel	6,300	Shipbuilders	Hitachi S.B. & E. Co, Sakurajima
Feb. 4	Rederi Rolf Wigand	*Jonwi* (420)	Tanker	19,600 (12,600)	525 × 71.9 × 40.1(30.9)	15	Diesel	8,200	Sulzer Bros	Bergens M.V.

TRIAL TRIPS

Date	Shipowners	Ship's Name and/or Yard No.	Type	Tons d.w. (gross)	Dimensions (ft.) L.b.p.(o.a.) × B. × D.(dft.)	Speed (knots)	Propelling Machinery	Total h.p.	Engine Builders	Shipbuilders
Yards in Great Britain and Northern Ireland										
Dec. 27	George Craig & Sons, Aberdeen	*Grampian Hill* (297)	Trawler	(214)	(116) × 23 × 12	—	6-cyl diesel	670	Ruston & Hornsby	John Lewis & Sons
Feb. —	Ashley Fishing Co	*Japonica*	Trawler	(250)	(115.33) × 25.33 × (11)	—	8-cyl diesel	—	Lister Blackstone	T. Mitchison
Feb. —	"K" Steamship Co	*Kayeson* (743)	Tanker	43,750 (28,300)	675(711.58) × 98 × 51.25(38)	16	Geared turbine	16,000	Shipbuilders	Hawthorn Leslie
Feb. —	Stevinson Hardy & Co	*Edward Stevinson* (1575)	Tanker	47,000 (30,900)	715 × 98 × 52.5(38)	—	Geared turbine	16,000	Shipbuilders	Harland & Wolff, Belfast
Feb. —	Steel & Bennie	*Brigadier* (273)	Tug	(210)	(111.25) × 28.25	12.5	8-cyl diesel	1,020	Crossley Bros	George Brown & Co (Marine)
Feb. —	Irvin & Johnston, Cape Town	*Linaria* (967)	Trawler	(360)	128.5 × 26.5 × 13.75	—	7-cyl B & W diesel	840	C. D. Holmes	Cook, Welton & Gemmel
Feb. —	Aberdeen owners	*Confederate*	Trawler	—	73	—	Diesel	—	—	Berwick Shipyard
Feb. 7	George Craig & Sons, Aberdeen	*Grampian Glen*	Trawler	(214)	(116) × 23 × 12	—	6-cyl diesel	670	Ruston & Hornsby	John Lewis & Sons
Feb. 15	Charente Steamship Co	*Custodian* (844)	Cargo	9,350 (8,850)	450 × 62 × 38.75(29)	16	6-cyl diesel	8,000	Shipbuilders	Wm. Doxford & Sons
Overseas Yards										
Nov. 12	Commissao de Marinha Mercante	*Mosqueiro* (131211)	Cargo	5,000 (4,180)	331.5(355.2) × 49.75 × 26.25(21.9)	12.5	Recip steam with exhaust turbine	2,500	Zgoda	Stocznia Gdanska
Nov. 14	U.S.S.R.	*Kupryn* (115003)	Factory trawler	1,300 (2,600)	241.1(278.9) × 45.25 × 23.33(17.75)	12.5	8-cyl Sulzer diesel	2,400	Zgoda	Stocznia Gdanska
Dec. 10	U.S.S.R.	*Boszniakovo* (131070)	Cargo	5,000 (4,180)	331.5(355.2) × 49.75 × 26.25(21.9)	12.5	Recip steam with exhaust turbine	2,500	Zgoda	Stocznia Gdanska
Dec. 15	U.S.S.R.	*Komiles* (151402)	Cargo	6,205 (4,638)	377.25(406.2) × 54.75 27.58(22.95)	16 (T)	5-cyl diesel	4,500	Sulzer Bros	Stocznia Gdanska
Dec. 17	U.S.S.R.	*Lesozawodsk* (154020)	Cargo	11,297 (9,820)	464.5(504.95 × 63.5 × 41.2(27.33)	16.5	8-cyl diesel	8,000	Fiat	Stocznia Gdanska
Dec. 21	U.S.S.R.	*Ivan Fiedorov* (162008)	Fish mother ship	9,500 (11,450)	465.9(509) × 65.58 × 38.1(26.95)	13	Tw.-scr. recip steam with exhaust turbine	5,000	Zgoda	Stocznia Gdanska

MARITIME NEWS IN BRIEF

Traffic at British Transport Docks rose last year by over 4½ mn tons to nearly 50 mn tons—an increase of 10 per cent compared with 1959. Imports, at 28,431,000 tons, were up by 16 per cent, while exports increased by 3 per cent, to 21,165,000 tons. The biggest increases were in iron ore imports and petroleum exports. Petroleum shipments rose by over 824,000 tons, or 16 per cent, to 6,079,000 tons.

A paper entitled "Technical Developments in the Steel Industry" will be read by Sir Andrew McCance, chairman and managing director of Colvilles Ltd, at 6 p.m. on March 8 at the Royal Society of Arts, John Adam Street, Adelphi, London WC2. A further paper entitled "Economic and Commercial Aspects of the Steel Industry" will be read by Sir Robert Shone, Executive Member of the Iron and Steel Board, at 6 p.m. on March 22.

Mr D. K. Patton of H. M. Tiedemann & Co Inc, 74 Trinity Place, New York, has been appointed Director of Science Studies of the Underwater Society of America. He will be responsible for the development of a scientific programme concerning the art of diving and its applications.

Mr J. A. Steven has been appointed a director of Bull's Metal & Marine Ltd.

Mr Ian D. Sinclair has been appointed a director and member of the executive committee of Canadian Pacific to fill the vacancy created by the death of Mr W. A. Mather; he has also been elected a vice-president.

Mr D. T. Harrison-Sleap (J. & C. Harrison Ltd) has been re-elected chairman, and Mr W. E. Fereday (Walter Runciman & Co Ltd) vice-chairman of the London Deep Sea Tramp Shipowners' Association.

Prince Philip has accepted an invitation to become president of the Institute of Marine Engineers for 1962/63.

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The Stoomvaart Maatschappij Nederland, Amsterdam, and the Koninklijke Rotterdamsche Lloyd N.V., Rotterdam, are to open a joint monthly shipping service from Hamburg, Bremen, Antwerp, Rotterdam and Amsterdam through the Panama Canal to the New Zealand ports of Auckland, Wellington, Lyttelton, Dunedin and Bluff. The new service will be inaugurated by the steamer *Friesland*, departing from Hamburg on March 8 for Bremen, Antwerp and Rotterdam.

The death has occurred of Mr J. H. Aston at the age of 90. Mr Aston was chairman of Tube Investments from 1941-44 and managing director 1919-41. He was a director of Stewarts & Lloyds from 1930 until his retirement in 1944.

Swissair and Scandinavian Airlines System will offer new economy-class fares to South America, cutting present tourist class fares by up to 30 per cent from March 1. The new economy class return fares from London to Rio de Janeiro are £244 7s; to Sao Paulo £250 15s; and to Montevideo and Buenos Aires £276 10s. Swissair and SAS will also offer reduced first-class fares up to 5 per cent below present levels.

MR G. C. BARTRAM has been appointed deputy managing director of Bartram & Sons Ltd, shipbuilders, Sunderland. He is the son of Mr R. A. Bartram, who remains chairman and managing director, and a great-great-grandson of the founder. He joined the firm in 1948 and after working in various departments, including two years as outfit manager, he was elected a director of the company in 1957

The Hull ship *Volo* has re-entered service with a new superstructure. Three months ago she was ravaged by fire at Gothenburg, Sweden, and repair work on the damaged ship was undertaken at A/B Gotaverken. The superstructure amidships, including the bridge, was cut away and removed. The officers', passengers' and captain's accommodation is all new; the wheelhouse has been enlarged and modernised and the bridge slightly streamlined. The former round ports have been replaced with the Swedish type square windows and there is now a Swedish flavour to her interior. The reconstruction has given her a pleasing appearance.

The City passenger office of the Union-Castle Line and the passenger office of the other lines in the British & Commonwealth Group is now located at Cayzer House, St Mary Axe, London EC3. Mr L. T. Webb, who is passenger manager Union-Castle Line City Office, has been appointed passenger manager for the Clan, Houston and Scottish Shire Lines and passenger manager London Office for the Springbok Line.

CAPTAIN J. P. DOBSON has been appointed to command the new Canadian Pacific liner "Empress of Canada". After serving as a midshipman in the First World War he became a cadet with the Canadian Pacific. In 1939 he was navagating officer of the "Empress of Australia" which took the late King George VI and the Queen Mother to Canada. He was called up by the Admiralty during the Second World War and was demobilised in 1946. He rejoined the Canadian Pacific and took his first company command, the cargo liner "Beaverglen" on her delivery

The new 27,300-grt Canadian Pacific liner *Empress of Canada* now fitting out at Vickers-Armstrongs Naval Yard at Walker-on-Tyne is to undergo sea and speed trials in March, after which she will proceed to Liverpool to prepare for her maiden voyage from Liverpool to Montreal on April 24.

Clelands Shipbuilding Co Ltd, Wallsend-on-Tyne, have received a contract for lengthening the coastal tanker *Ben Hittinger* which will increase its capacity from 570 tons to 645 tons. This will be done by building-in a new midship section 21ft long.

Pieter Schoen & Zoon Ltd, makers of "Lily" brand marine paints, have established a new depot at Le Havre, France. The representative in charge of this depot is Mr A. de Voogd, 89 Rue J. B. Gilbert, Sotteville Les Rouen (telephone: 70 27 61).

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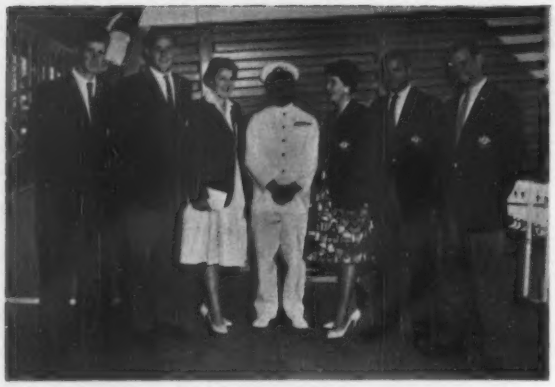
An agreement is to be signed between A.I.R. (Air Conditioning and Refrigeration), of Glasgow and Liverpool, and Air Control Installations (A.C.I.), of Ruislip, Middlesex, to form a close working association between the two companies in the marine field. A.I.R. is closely associated with Drammens-Jern of Norway, while A.C.I.—manufacturers of ventilation and air conditioning equipment—through its connection with AB Svenska Flatfabriken of Sweden, manufactures and installs the Indivent air conditioning system in ships. Mr R. A. Robertson, chairman of the Hutchison & Company group of companies, has been appointed managing director of A.I.R.

For the first time since the war the "Adriatica" Line surpassed its target of 100,000 passengers during 1960. The full total was 103,014—23,100 more than the previous year. There was an appreciable increase in cargo which in 1960



P & O "CANBERRA" AWARD WINNERS

The six young Australian farmers, winners of the 1961 P & O "Canberra" Award for the best young farmer in each State, are seen with Captain R. J. Craddock, master of the liner "Orion," on embarkation at Fremantle. The young farmers arrived last week at Tilbury and will spend the next six months studying farming methods in Britain and visiting centres of agricultural interest. On their return to Australia they will compete for the P & O "Canberra" Scholarship, worth £A1,000, which will provide for a course at a University Agricultural or Technical College, or a cash grant of £A750

reached 355,537 tons as against 313,045 tons in the previous year.

THE 1,200-tons German tanker *Palma*, chartered by the Israeli enterprise of "Gadot" Chemical Tankers & Terminals Ltd, is shortly due to arrive in Kishon harbour in Haifa Bay with a bulk shipment of phenol (carbolic acid). It is the first bulk shipment of this chemical.

MR STAVROS NIARCHOS, the Greek shipowner, has given as a donation to the Royal National Life-boat Institution the sum of £500 paid to him by way of damages in a law suit against the *Evening Standard*.

THE FRENCH train ferry *Saint-Germain* has been withdrawn from the Dover-Dunkirk service for two months to have a transverse propulsion unit fitted.

SCINDIA STEAMSHIPS (LONDON) LTD have been appointed the London agents of the Mogul Line Ltd in place of Geoffrey Turner & Co Ltd.

SHIPS entering the port of Rotterdam in 1960 increased from 23,291 of 49,887,713 net registered tons in 1959, to 24,344 ships of 56,912,358 tons.

EL AL ISRAEL AIRLINES have ordered an additional Boeing 707 Intercontinental jet airliner, which will bring its new jet fleet to three.

• • • •

WITH the aim of obtaining a better understanding of public relations and its significance to commerce and industry, Galitzine & Partners Ltd are preparing a series of pamphlets on various aspects of the subject. Their aim is to make it clear how all the components loosely described as "public relations"—such as internal relations, customer relations, press relations, and relations in the political, educational and social field, as well as the image that the company presents to the public—can affect a company's efficiency and profitability.

DURING 1960, 7,530 ships, of 19,304,714 grt entered the port of Amsterdam, as against 7,219, of 18,070,782 tons, in 1959. The total for Rotterdam for the year was a record of 24,297 as against 23,291 in 1959. The gross registered tonnage, at 97,986,344 tons, was over 10 million tons more than in 1959.

PRINCESS MARGARET is to launch HMS *Hampshire*—the second of the Royal Navy's guided missile ships—at the yard of John Brown & Co (Clydebank) Ltd on March 16.

THE first air mail parcel service in the world was introduced in July 1921. In 1960 the number of air parcels handled by the Post Office reached the record high level of one million.

RECENT SHIP SALES

(*Continued from page 212*)

Msk.) sold by Vangelistria Cia. Mar. Ltda, Puerto Limon (Lebanese flag), to Adel Abdul-Wahab, Tripoli, and renamed *Rida*, retaining Lebanese flag.

Cargo steamer *Maiotis* (ex-*Poseidon*, ex-*Berk*, ex-*Nieuwe Maas*, 3,858 grt, 2,287 nrt, built Zaandam 1918 by N.V. Werf Conrad) sold by Synodinos Brothers, Piraeus, to Leandros Cia. Maritima S.A. Panama, and renamed *Evangelos*, under the Lebanese flag.

Motor coaster *Venga* (ex-*Verma*, 300 dwt, 250 grt, 109 nrt, built Heusden 1948 by De Haan & Oerlemans Schpsw.) sold by A/R Vestenfjeldske Ruteselskap, Bergen, to French buyers at Martinique, and renamed *Maris Stella*.

Steam trawler *Auguste Kampf* (394 grt, 142 nrt, built and engined Bremerhaven by Deutsche Sch. u Masch. A. G. Seebeck) sold by Hochseefischerei Carl Kampf, Bremerhaven, to Italian buyers with end-March delivery, and to be converted into a motor vessel and fitted with refrigerating machinery.

Steam trawler *Julius Foch* (399 grt, 160 nrt, built and engined Hamburg 1948 by Howaldtswerke A.G.) sold by Partenreed. "Julius Foch" (H. Pickenpack Hochseefischerei), Hamburg, to Italian buyers who have renamed her *Emanuele Junior*. She is to be converted into a motorship at Bari.

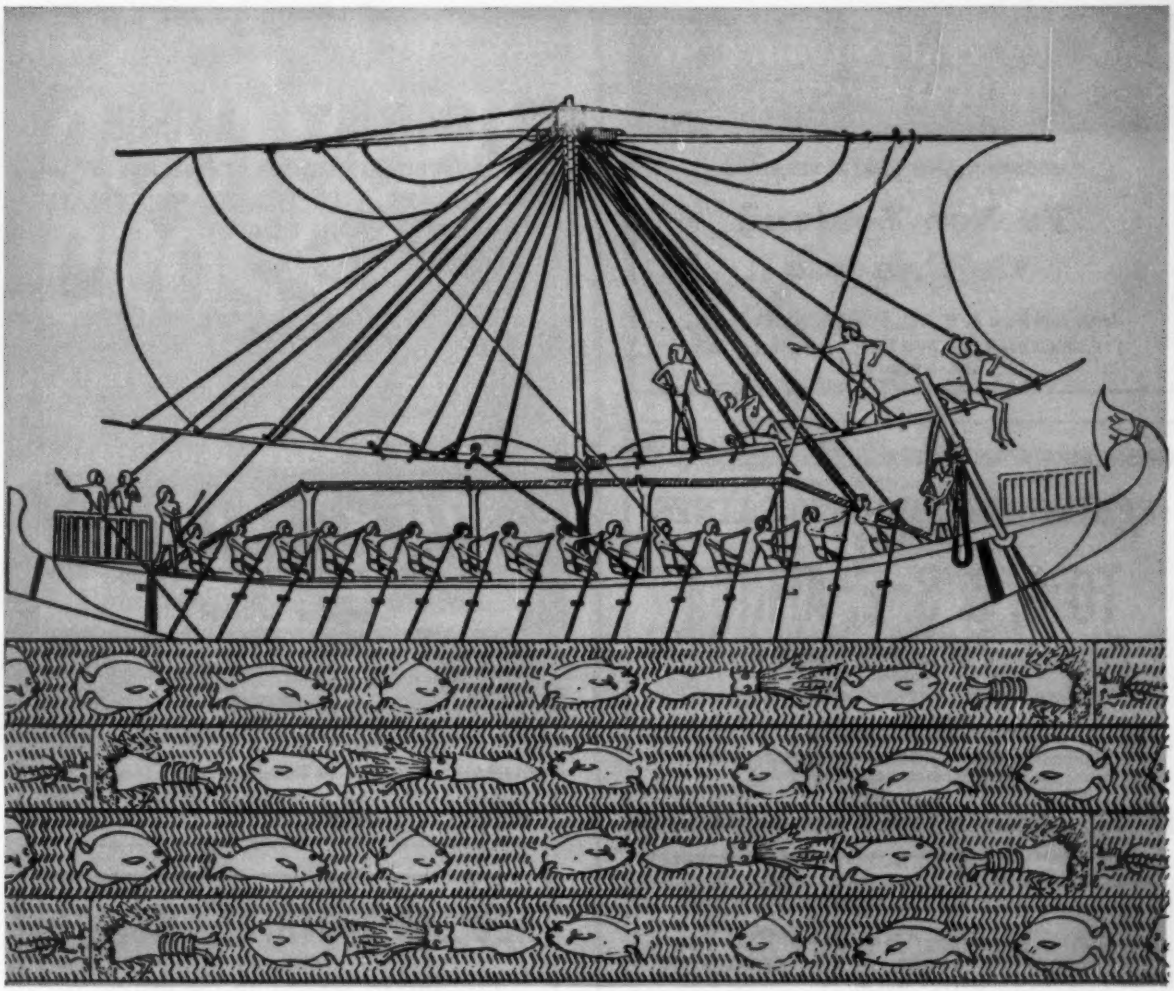
AN attractive book entitled *Shipping and Shell* has been received from Shell-Mex & BP Ltd. During the past five years or so a series of 25 distinctive colour advertisements have appeared in THE SHIPPING WORLD and other shipping papers, all of them paying tribute to shipping companies using Shell marine lubricants. The advertisements are paired off with the biographies of the companies concerned, making an interesting picturebook of the cream of British shipping, as well as a reminder of Shell's worldwide services.

FIFTY YEARS AGO

From THE SHIPPING WORLD of 22 February 1911

In the rapid march of new ideas which characterises the present century, we have already become accustomed to hear the claims of steam as a driving power contested by rivals of which great things are expected. Of these rivals gas and oil are the chief, and both had fair tests in works ashore and in small craft afloat. But a sea-going gas-driven vessel must still be regarded as a novelty, and it is surprising that for some months past a good deal of interest has centred in a vessel of some 300 tons which has been building at the yard of Messrs. J. C. Eltringham & Co., South Shields, for the Holzapfel Marine Gas Power Syndicate Ltd., who are determined to give suction gas a fair trial on the sea. The little vessel herself is named *Holzapfel 1*, and she is not only especially interesting as the first sea-going gas-driven vessel, but also for the fact that she is to be followed before the end of the year by a much larger vessel which the Holzapfel firm have boldly decided to build.

An interesting piece of news for underwriters last week was the report that the launch of the new French mail steamship *Rochambeau* at St. Nazaire had been at first unsuccessful owing to the freezing of the grease on the slips. The *Rochambeau* had been built by the Chantier et Ateliers de Saint Nazaire for the Havre-New York service of the Compagnie Generale Transatlantique. She was insured at the time of launching for £110,000, while the valuation for insurance when the vessel is completed is £318,000. She will occupy the third place in the fleet of the company, after the liners *France* and *Provence*. The *Rochambeau* has a displacement of 17,500 tons with engines of 12,500 h.p. She has accommodation for 420 cabin and 1,459 steerage passengers.



The Conquest of the Sea continues

Primeval man in his hollowed-out tree trunk may be forgiven for having congratulated himself on achieving the ultimate in ship design. The same pride must have recurred during the millennia when oars, sails and propellers replaced the pole and the paddle as means of propulsion. Even today new materials and techniques change the design and performance of ships. Take Marinite. This light, incombustible sheet, used for accommodation structures, has given ships' designers new scope, one instance being the simultaneous sheathing and fire insulation of aluminium in ships' superstructure.

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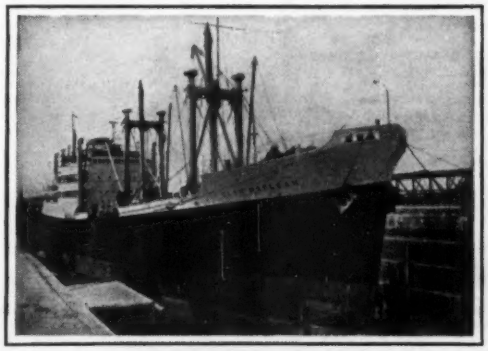

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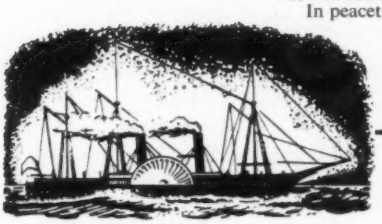

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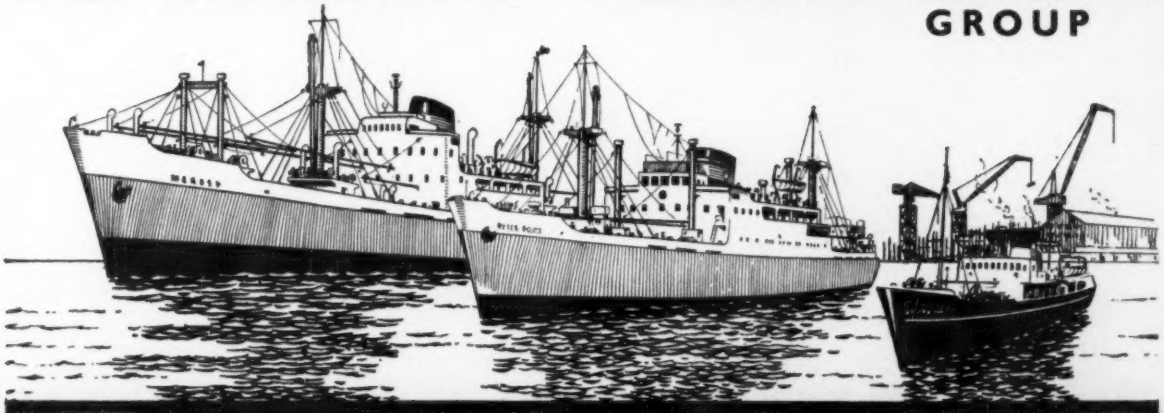

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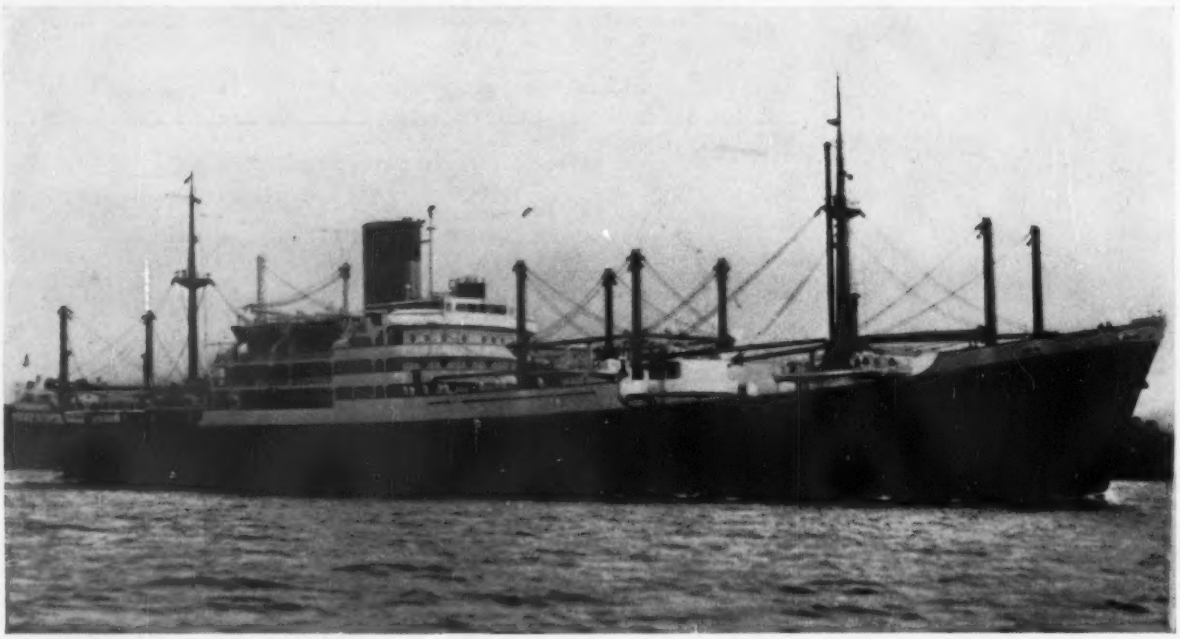

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